Occupational Employment in Selected Nonmanufacturing Industries—North Carolina, 1985

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Labor Market Information Division
Employment Security Commission of North Carolina

Occupational Employment in Selected Nonmanufacturing Industries in North Carolina

1985

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A special thanks is extended to each of the more than 6,000 employers whose survey responses provided the occupational information on which this report was developed. We also thank the North Carolina Department of Administration for providing summary data for state government employment. Without their cooperation, a meaningful publication would have been impossible.

Introduction

The Occupational Employment Statistics (OES) program is a cooperative effort of the Bureau of Labor Statistics and the nation's State Employment Security Agencies. In North Carolina, the Labor Market Information Division bears the responsibility for the collection, analysis and distribution of information relating to the occupational staffing patterns of the state's industries. Industries are surveyed on a three-year rotating cycle to increase the cost effectiveness of the data collection and to reduce the reporting burden of employers who are asked to participate in the study. Research done by the Bureau of Labor Statistics has indicated that staffing patterns tend to remain relatively static, and therefore useful, over this time span. The project looks at only nonagricultural wage and salary employment. Data for self-employment, agriculture, and unpaid family members are not included. The three survey rounds are defined as follows:

Manufacturing and Hospitals

Nonmanufacturing Industries

Selected Nonmanufacturing Industries and Government

When viewed together, the results of these three survey rounds give a clear and accurate picture of occupations and industries in North Carolina which may be utilized by educators, counselors and planners in a number of ways including, but not limited to the following:

- Curriculum and Training Applications
  - for assessment of current and future occupational needs
  - for planning study curricula and development of training programs in accordance with changing job requirements
- Career and Job Counseling
  - for guidance of students, trainees, and job seekers in career or job selection
  - for background in applicant referrals to industries and locations where specific skills are needed
- Industry and Business Administration
  - for improvement of worker selection by more equitably matching job training with occupational needs
  - for policy formulation and planning in terms of present and anticipated occupation patterns
  - for increased cooperation between industry and educational planners in determining needed program emphasis to meet the needs of a changing work force.

This is the sixth report in the OES series based on a survey of covered residual nonmanufacturing establishments as defined in the 1972 edition of the Standard Industrial Classification Manual (SIC). Data for firms engaged in Transportation, Communication, and Public Utilities; Wholesale and Retail Trade; Educational Services and Local, State, and Federal Government are included in this publication.

In 1984, there were 672,400 persons employed in the surveyed nonmanufacturing industries in North Carolina. This represents 25.6% of all nonagricultural wage and salary employment in the state, compared to the 24.2% shown by the 1982 survey.

Figure 1 depicts the relationship of nonmanufacturing employment to the other major divisions of nonagricultural wage and salary employment in the state for 1985. Since the last OES survey on nonmanufacturing industries three years ago, this industry sector, as well as wholesale and retail trade has experienced considerable growth, with employment gains of 18.9% and 20.7%, respectively. During the same period, manufacturing and government were gaining employment at a slower rate while actually decreasing on their proportionate share of total nonagricultural wage and salary employment from 1982 levels of 33.4% and 17.0% to respective shares of 31.5% and 16.1% in 1985

Figure 2 shows the average annual nonagricultural wage and salary employment in North Carolina for the ten-year period, 1975-1985. Figure 3 reflects average annual employment in the nonmanufacturing sector for the same period.

Note: Employment data for Figures 1, 2 and 3 are expressed as annual average figures. The data were provided by the Current Employment Statistics (CES) Unit of the Labor Market Information Division.

FIGURE 1

Nonmanufacturing Employment Compared to Other Major Industry Sectors - 1985

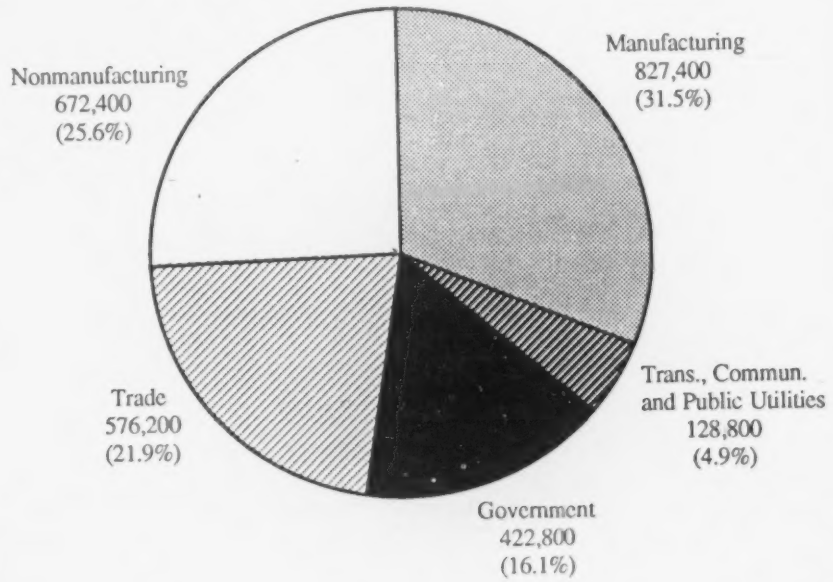
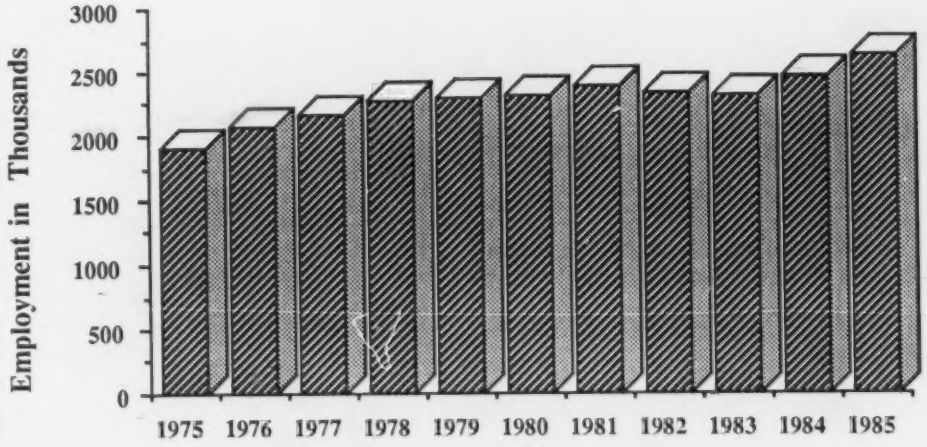


FIGURE 2

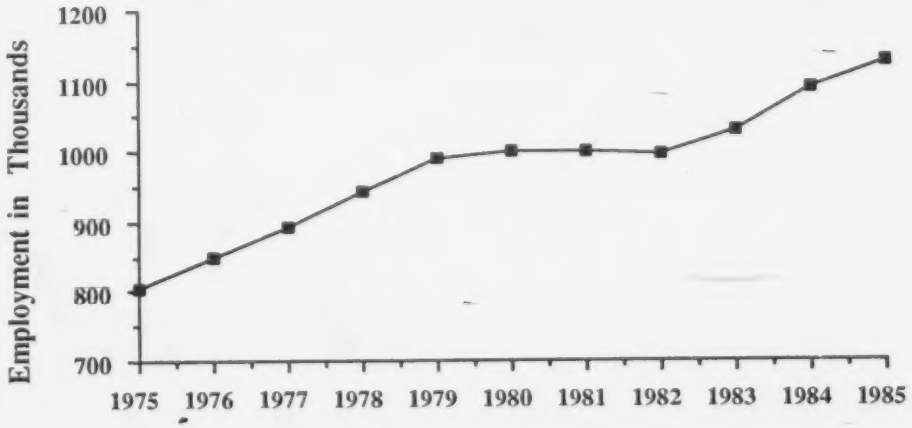
Nonagricultural Wage and Salary Employment in North Carolina, 1975 - 1985



NOTE: Annual average employment is based on place of residence.

FIGURE 3

Nonmanufacturing Wage and Salary Employment in North Carolina, 1975 - 1985



NOTE: Employment for this table represents only the nonmanufacturing industries included in this survey cycle. These are (1) Transportation, Communication, and Public Utilities; (2) Wholesale and Retail Trade; (3) Federal, State and Local Government, including SIC 82 - Educational Services. Data supplied by the Current Employment Statistics (CES) Unit.

SIC 40

RAILROAD TRANSPORTATION

MAY 1985

This major group includes establishments furnishing transportation by line-haul railroad, as well as REA Express, and switching and terminal establishments. Railways serving a single municipality, contiguous municipalities, or a municipality and its suburban areas are classified in Major Group 41. Other services related to railroad transportation are classified in Major Group 47.

Occupation	Estimated Employment 1/	Percent Distribution 1/
Total Employment	5,100	100.0
Managers and Officers	160	3.2
Communications, Transportation, and Utilities Operations Managers	140	2.8
General Managers and Top Executives	20	0.4
Professional and Technical Workers	40	0.8
Sales Workers	120	2.3
Sales Agents, Selected Business Services	100	1.9
Other Sales and Related Workers	20	0.4
Clerical Workers	450	8.7
Clerical Supervisors	60	1.2
Secretaries	30	0.6
Bookkeeping, Accounting, and Auditing Clerks	20	0.4
General Office Clerks	30	0.6
Other Clerical and Administrative Workers	310	5.9
Service Workers	70	1.4
Production and Maintenance Workers	4,260	83.5
Construction Trades Supervisors	190	3.8
Rail Car Repairers	380	7.4
Signal or Track Switch Maintainers	140	2.7
Rail-Track Laying and Maintenance Equipment Operators	460	8.9
Railroad Conductors and Yardmasters	530	10.3
Locomotive Engineers	280	5.5
Other Laborers	2,280	44.7

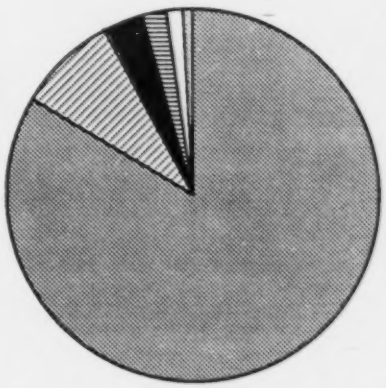
TABLE 1

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Production and Maintenance Laborers	2,280	44.7
Railroad Conductors and Yardmasters	530	10.3
Rail-Track Laying and Maintenance Equipment Operators	460	8.9
Rail Car Repairers	380	7.4
Locomotive Engineers	280	5.5

FIGURE 4

Percent Distribution of Employment by Major Occupational Category



SIC 41

LOCAL AND SUBURBAN TRANSIT AND INTERURBAN HIGHWAY PASSENGER TRANSPORTATION

May 1985

This classification includes those establishments engaged in furnishing local and suburban passenger transportation as well as highway passenger transportation. Highway passenger terminals or maintenance facilities are also included in this major group.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	3,690	N.A.	100.0
Managers and Officers	140	N.A.	4.0
Communications, Transportation, and Utilities Operations Managers	70	11.9	2.0
General Managers and Top Executives	50	6.9	1.3
Other Managers and Administrators	20	N.A.	0.7
Professional and Technical Workers	220	N.A.	6.1
Emergency Medical Technicians	200	13.4	5.4
Other Professional and Technical Workers	20	N.A.	0.7
Sales Workers	20	N.A.	0.7
Clerical Workers	790	N.A.	21.3
Reservation and Transportation Ticket Agents	290	10.5	7.8
Secretaries	70	11.9	1.9
Receptionists and Information Clerks	20	26.7	0.7
Bookkeeping, Accounting, and Auditing Clerks	60	13.9	1.5
General Office Clerks	90	21.5	2.4
Dispatchers - except Police, Fire, and Ambulance	190	12.6	5.0
Other Clerical and Administrative Workers	70	N.A.	2.0
Service Workers	90	N.A.	2.5
Janitors and Cleaners	20	16.9	0.7
Baggers, Porters, and Bellhops	40	14.9	1.0
Other Service Workers	30	N.A.	0.8
Production and Maintenance Workers	2,410	N.A.	65.4
Transportation Supervisors	30	8.6	0.8

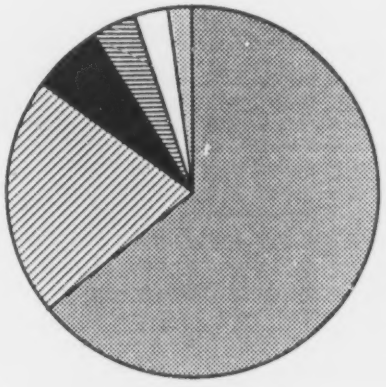
Automotive Mechanics	110	27.2	2.9
Bus, Truck, and Diesel Mechanics	130	9.4	3.4
Other Mechanics, Repairers, and Installers	20	N.A.	0.7
Bus Drivers	1,260	2.7	34.2
Bus Drivers, School	150	4.3	4.0
Taxi Drivers	640	10.2	17.4
Vehicle Washers and Equipment Cleaners	50	6.5	1.3
Other Laborers	20	N.A.	0.7

TABLE 2

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Bus Drivers	1,260	34.2
Taxi Drivers	640	17.4
Reservations and Transportation Ticket Agents	290	7.8
Emergency Medical Technicians	200	5.4
Dispatchers - except Police, Fire, and Ambulance	190	5.0

FIGURE 5

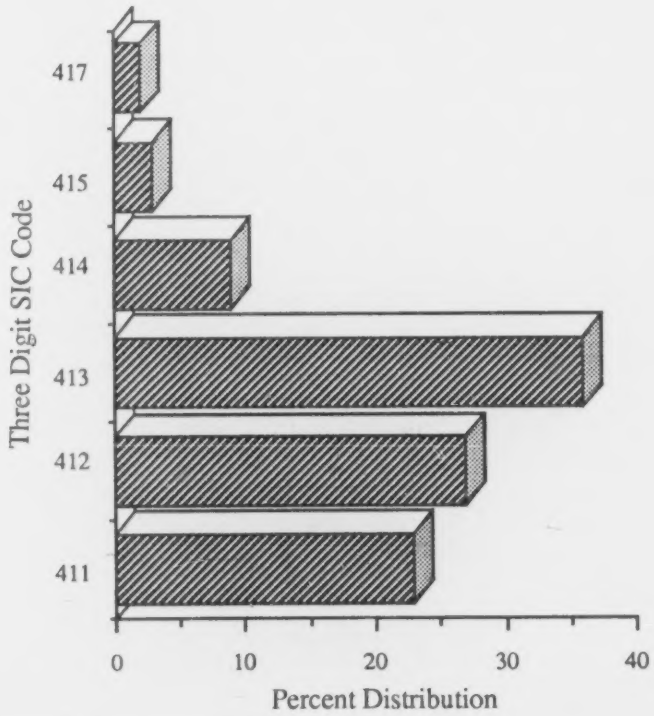


Percent Distribution of Employment by Major Occupational Category

- Production and Maintenance Workers (65.4%)
- Clerical Workers (21.3%)
- Professional and Technical Workers (6.1%)
- Managers and Officers (4.0%)
- Service Workers (2.5%)
- Sales Workers (0.7%)

FIGURE 6

Estimated Employment Distribution by Three Digit SIC Code



SIC 42

MOTOR FREIGHT TRANSPORTATION AND WAREHOUSING

May 1985

This major group includes establishments furnishing local or long-distance trucking, or transfer services, or those engaged in the storage of farm products, furniture and other household goods, or commercial goods of any nature. The operation of terminal facilities for handling freight, with or without maintenance facilities, is also included.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	50,650	N.A.	100.0
Managers and Officers	2,570	N.A.	5.0
Financial Managers	50	19.4	0.1
Personnel and Labor Relations Managers	70	19.3	0.1
Marketing, Advertising, and Public Relations Managers	100	19.6	0.2
Communications, Transportation, and Utilities Operations Managers	1,180	13.0	2.3
General Managers and Top Executives	890	16.3	1.8
Other Managers and Administrators	280	N.A.	0.5
Professional and Technical Workers	420	N.A.	0.9
Accountants and Auditors	120	21.8	0.2
Personnel and Labor Relations Specialists	40	19.8	0.1
Systems Analysts, EDP	50	22.4	0.1
Computer Programmers	80	15.5	0.2
Computer Programmer Aides	30	20.9	0.1
Other Professional and Technical Workers	100	N.A.	0.2
Sales Workers	730	N.A.	1.5
Sales Supervisors	90	19.1	0.2
Sales Agents, Selected Business Services	520	22.8	1.0
Cashiers	40	19.5	0.1
Other Sales and Related Workers	80	N.A.	0.2
Clerical Workers	9,930	N.A.	19.6
Clerical and Administrative Supervisors	610	13.6	1.2
Credit Checkers	50	22.5	0.1
Adjustment Clerks	160	15.2	0.3

Secretaries	680	16.4	1.3
Receptionists and Information Clerks	50	18.6	0.1
Personnel Clerks	50	18.7	0.1
File Clerks	60	15.7	0.1
Bookkeeping, Accounting, and Auditing Clerks	670	15.7	1.3
Payroll and Timekeeping Clerks	110	14.9	0.2
Billing, Cost, and Rate Clerks	720	9.6	1.4
General Office Clerks	1,640	10.9	3.2
Computer Operators	70	26.6	0.1
Data Entry Keyers	140	12.8	0.3
Switchboard Operators	60	15.7	0.1
Dispatchers - except Police, Fire and Ambulance	1,240	13.4	2.5
Production, Planning, and Expediting Clerks	70	15.9	0.1
Stock Clerks - Stockroom or Warehouse	1,180	21.6	2.3
Traffic, Shipping and Receiving Clerks	1,200	32.6	2.4
Other Clerical and Administrative Workers	1,170	N.A.	2.3
Service Workers	330	N.A.	0.6
Guards and Watch Guards	60	32.2	0.1
Janitors and Cleaners	270	29.6	0.5
Production and Maintenance Workers	36,660	N.A.	72.3
Mechanic and Repairer Supervisors	180	11.7	0.4
Transportation Supervisors	570	18.3	1.1
Laborer Supervisors	620	18.9	1.2
Other Supervisors	50	N.A.	0.1
Transportation Inspectors	50	32.4	0.1
Machinery Maintenance Mechanics	180	34.4	0.4
Automotive Mechanics	260	34.1	0.5
Automotive Body and Related Mechanics	220	17.2	0.4
Bus, Truck, and Diesel Mechanics	2,280	9.9	4.5
Tire Repairers and Changers	150	20.2	0.3
Other Mechanics, Installers, and Repairers	450	N.A.	0.9
Other Construction Trades Workers	60	N.A.	0.1
Other Machine Operators and Tenders	190	N.A.	0.4
Other Hand Workers	290	N.A.	0.5
Truck Drivers, Heavy - inc. Tractor-Trailer	19,530	4.9	38.6
Truck Drivers, Light - inc. Delivery and Route Workers	3,600	18.9	7.1

Other Transportation Workers	420	N.A.	0.8
Industrial Truck and Tractor Operators	1,470	13.4	2.9
Other Material Moving Equipment Operators	340	N.A.	0.6
Hand Packers and Packagers	750	31.8	1.5
Vehicle Washers and Equipment Cleaners	110	23.9	0.2
Other Laborers	4,890	N.A.	9.7

TABLE 3

The Five Largest Specific Occupations

Occupations	Estimated Employment	Percent of Total Employment
Truck Drivers, Heavy - inc. Tractor-Trailer	19,530	38.6
Truck Drivers, Light - inc. Delivery and RouteWorkers	3,600	7.1
Bus, Truck, and Diesel Mechanics	2,280	4.5
General Office Clerks	1,640	3.2
Industrial Truck and Tractor Operators	1,470	2.9

FIGURE 7

Percent Distribution of Employment by Major Occupational Category

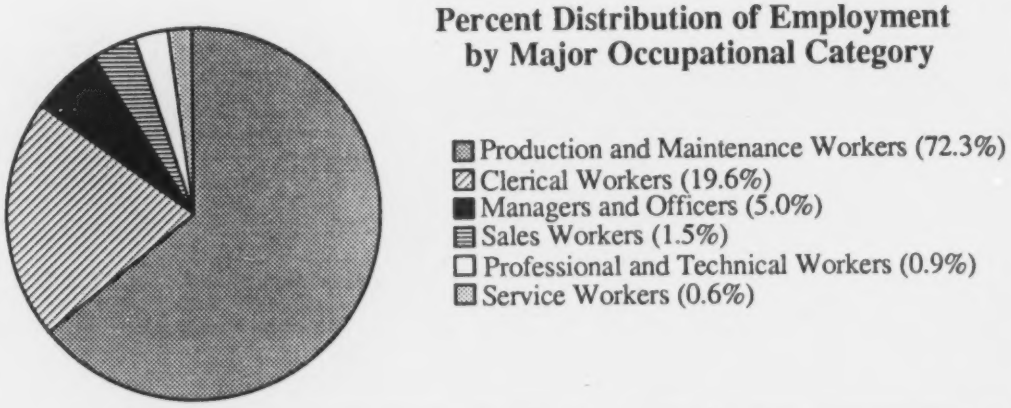
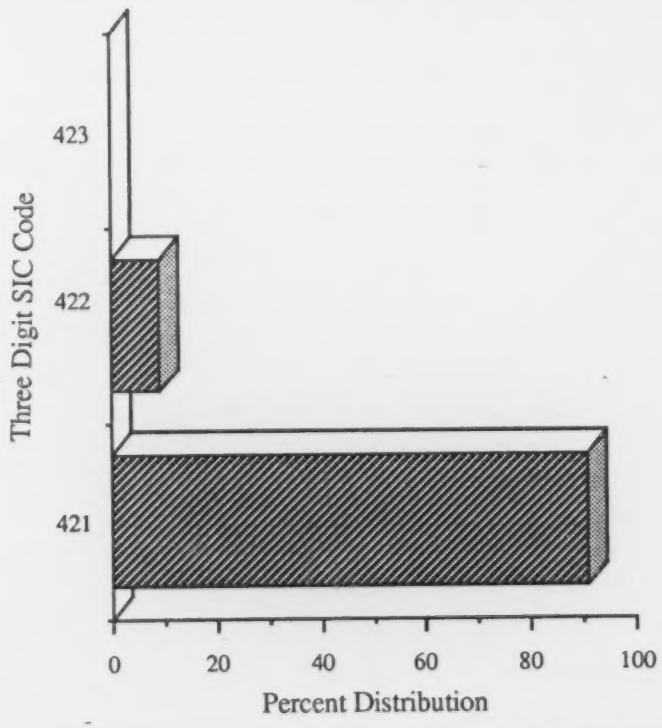


FIGURE 8

Estimated Employment Distribution by Three Digit SIC Code



SIC 45

TRANSPORTATION BY AIR

June 1985

Establishments in this group are engaged in furnishing domestic and foreign transportation by air and also include those operating airports and flying fields and furnishing terminal services. Services which may use airplanes incidentally, are classified according to the service performed.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	10,270	N.A.	100.0
Managers and Officers	360	N.A.	3.5
Communications, Transportation, and Utilities Operations Managers	170	17.6	1.6
General Managers and Top Executives	160	4.3	1.6
Other Managers and Administrators	30	N.A.	0.3
Professional and Technical Workers	510	N.A.	5.0
Accountants and Auditors	40	9.8	0.4
Other Management Support Workers	80	N.A.	0.8
Other Engineers	30	N.A.	0.3
Other Engineering Technicians and Technologists	60	N.A.	0.6
Teachers and Instructors, Vocational Education	80	25.5	0.8
Other Professional and Technical Workers	220	N.A.	2.1
Sales Workers	90	N.A.	0.9
Sales Supervisors	20	14.6	0.2
Sales Agents, Selected Business Services	70	22.8	0.7
Clerical Workers	5,030	N.A.	49.0
Clerical and Administrative Supervisors	230	4.8	2.3
Reservation and Transportation Ticket Agents	3,450	3.4	33.6
Secretaries	160	11.2	1.6
Bookkeeping, Accounting, and Auditing Clerks	250	4.4	2.4
Billing, Cost, and Rate Clerks	130	4.6	1.2
General Office Clerks	150	13.2	1.5
Dispatchers - except Fire, Police, and Ambulance	30	25.7	0.3

Transportation Agents	230	33.9	2.2
Stock Clerks - Stockroom or Warehouse	100	0.0	1.0
Other Clerical and Administrative Workers	300	N.A.	3.0
Service Workers	910	N.A.	8.9
Service Supervisors	20	1.9	0.2
Food and Beverage Preparation Workers	90	3.2	0.9
Cleaning and Building Service Workers	20	29.3	0.2
Other Service Workers	780	N.A.	7.6
Production and Maintenance Workers	3,390	N.A.	32.8
Mechanic and Repairer Supervisors	90	9.0	0.9
Transportation Supervisors	40	30.8	0.4
Aircraft Mechanics	770	6.2	7.5
Other Mechanics, Installers, and Repairers	270	N.A.	2.6
Aircraft Pilots and Flight Engineers	1,240	5.0	12.1
Other Transportation Workers	250	N.A.	2.4
Vehicle Washers and Equipment Cleaners	250	18.5	2.4
Other Laborers	480	N.A.	4.7

TABLE 4

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Reservation and Transportation Ticket Agents	3,450	33.6
Aircraft Pilots and Flight Engineers	1,240	12.1
Aircraft Mechanics	770	7.5
Bookkeeping, Accounting, and Auditing Clerks	250	2.4
Vehicle Washers and Equipment Cleaners	250	2.4

FIGURE 9

Percent Distribution of Employment by Major Occupational Category

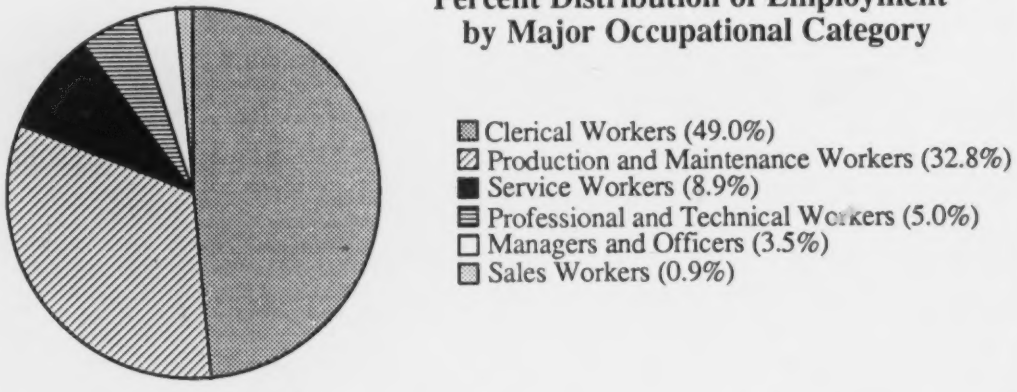
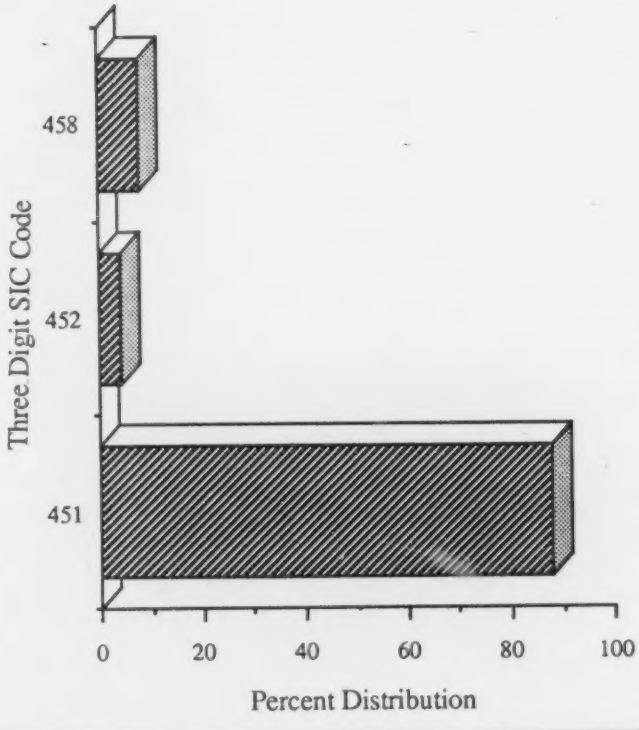


FIGURE 10

Estimated Employment Distribution by Three Digit SIC Code



SIC 47

TRANSPORTATION SERVICES

April 1985

This major group includes establishments furnishing services incidental to transportation, such as forwarding and packing services, and the arrangement of passenger and freight transportation.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	2,550	N.A.	100.0
Managers and Officers	170	N.A.	6.7
Communications, Transportation, and Utilities Operators Managers	100	22.6	4.0
General Managers and Top Executives	70	12.1	2.7
Professional and Technical Workers	20	N.A.	0.8
Accountants and Auditors	20	17.9	0.8
Sales Workers	1,240	N.A.	48.6
Sales Agents, Selected Business Services	140	12.7	5.7
Travel Agents	1,100	2.3	42.9
Clerical Workers	740	N.A.	29.0
Clerical and Administrative Supervisors	150	6.7	5.8
Secretaries	50	11.5	2.1
Receptionists and Information Clerks	40	9.3	1.6
Bookkeeping, Accounting, and Auditing Clerks	130	5.5	5.2
General Office Clerks	80	19.5	3.2
Computer Operators	30	27.5	1.1
Messengers	20	13.2	0.8
Dispatchers - except Police, Fire, and Ambulance	40	26.6	1.7
Traffic, Shipping, and Receiving Clerks	70	16.2	2.8
Other Clerical and Administrative Workers	130	N.A.	4.7
Service Workers	40	N.A.	1.6
Guides	20	26.8	0.8
Other Service Workers	20	N.A.	0.8
Production and Maintenance Workers	330	N.A.	12.9

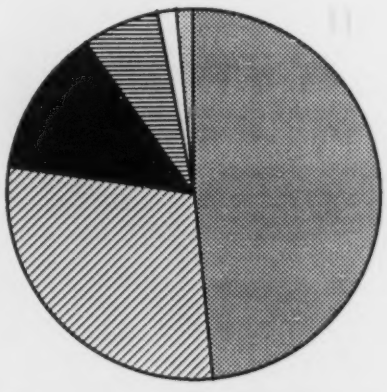
Laborer Supervisors	20	2.7	0.8
Other Mechanics, Installers, and Repairers	30	N.A.	1.1
Other Transportation Workers	60	N.A.	2.4
Industrial Truck and Tractor Operators	50	17.8	2.0
Other Laborers	170	N.A.	6.6

TABLE 5

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Travel Agents	1,100	42.9
Clerical and Administrative Supervisors	150	5.8
Sales Agents, Selected Business Services	140	5.7
Bookkeeping, Accounting, and Auditing Services	130	5.2
Communications, Transportation, and Utilities Operations Managers	100	4.0

FIGURE 11

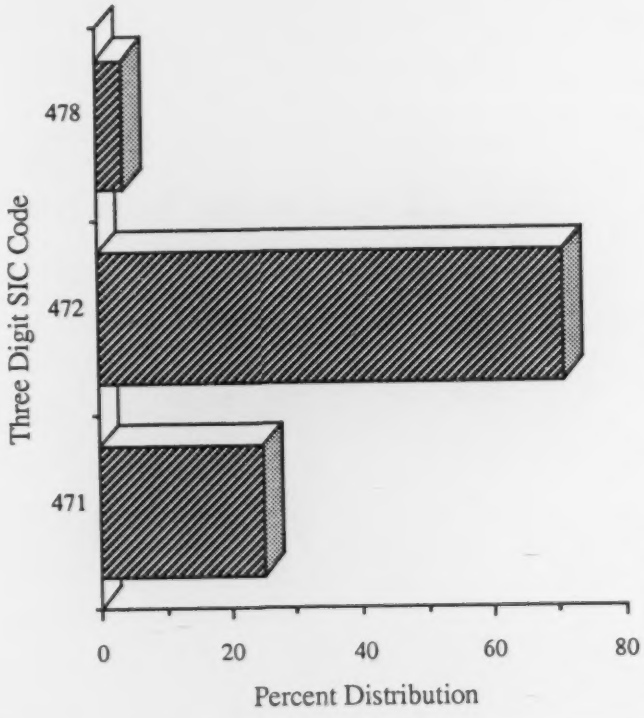


Percent Distribution of Employment by Major Occupational Category

- Sales Workers (48.6%)
- Clerical Workers (29.0%)
- Production and Maintenance Workers (12.9%)
- Managers and Officers (6.7%)
- Service Workers (1.6%)
- Professional and Technical Workers (0.8%)

FIGURE 12

Estimated Employment Distribution by Three Digit SIC Code



SIC 48

COMMUNICATION

June 85

This major group includes establishments furnishing point-to-point communication service, whether by wire or radio, and whether intended to be received aurally or visually, and radio and television broadcasting. Services for the exchange or recording of messages are also included.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	24,480	N.A.	100.0
Managers and Officers	3,140	N.A.	12.8
Financial Managers	180	10.4	0.7
Personnel and Labor Relations Managers	20	10.8	0.1
Marketing, Advertising, and Public Relations Managers	350	7.6	1.4
Administrative Service Managers	40	27.0	0.1
Engineering, Mathematical, and Natural Sciences Managers	140	9.5	0.6
Communications, Transportation, and Utilities Managers	1,240	3.7	5.1
General Managers and Top Executives	400	6.8	1.6
Other Managers and Administrators	770	N.A.	3.1
Professional and Technical Workers	5,240	N.A.	21.4
Accountants and Auditors	90	12.5	0.4
Budget Analysts	20	13.4	0.1
Other Financial Specialists	20	N.A.	0.1
Personnel and Labor Relations Specialists	40	5.3	0.2
Other Management Support Workers	280	N.A.	1.1
Electrical and Electronic Engineers	520	4.3	2.1
Other Engineers	160	N.A.	0.6
Electrical and Electronic Engineering Technicians and Technologists	560	8.3	2.3
Drafters	110	3.9	0.4
Other Engineering Technicians and Technologists	50	N.A.	0.2
Systems Analysts, EDP	40	5.1	0.2
Computer Programmers	40	10.5	0.2
Writers and Editors	140	10.2	0.6
Public Relations Specialists	40	8.8	0.2

Reporters and Correspondents	290	5.8	1.2
Broadcast News Analysts	110	13.3	0.4
Announcers, Radio and Television	1,500	4.9	6.1
Photographers	100	7.2	0.4
Camera Operators, Television and Motion Pictures	160	6.7	0.7
Broadcast Technicians	540	9.6	2.2
Film Editors	30	16.8	0.1
Artists	20	11.1	0.1
Designers	20	13.3	0.1
Producers, Directors, and Actors	140	6.4	0.6
Radio Operators	20	26.8	0.1
Other Professional and Technical Workers	200	N.A.	0.8
Sales Workers	1,860	N.A.	7.6
Sales Supervisors	130	16.6	0.5
Sales Agents, Selected Business Services	600	7.8	2.5
Sales Agents, Advertising	460	8.6	1.9
Cashiers	180	19.6	0.7
Other Sales and Related Workers	490	N.A.	2.0
Clerical Workers	8,300	N.A.	33.9
Clerical and Administrative Supervisors	200	10.4	0.8
Adjustment Clerks	110	10.8	0.4
Bill and Account Collectors	30	3.5	0.1
Secretaries	520	5.6	2.1
Stenographers	110	7.6	0.4
Receptionists and Information Clerks	100	12.2	0.4
Typists	290	5.6	1.2
Personnel Clerks	30	11.6	0.1
Order Clerks	100	3.6	0.4
Statistical Clerks	50	4.4	0.2
Customer Service Representatives, Utilities	730	7.9	3.0
Bookkeeping, Accounting, and Auditing Clerks	580	5.1	2.4
Payroll and Timekeeping Clerks	30	12.9	0.1
Billing, Cost, and Rate Clerks	90	17.6	0.4
General Office Clerks	1,720	4.4	7.0
Billing, Posting, and Calculating Machine Operators	30	25.6	0.1
Computer Operators	130	12.2	0.5
Data Entry Keyers	30	11.4	0.1
Other Office Machine Operators	70	N.A.	0.3
Switchboard Operators	50	5.4	0.2
Central Office Operators	1,780	17.1	7.3
Mail Clerks	20	11.9	0.1

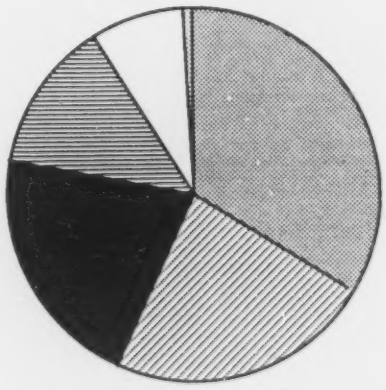
Dispatchers - except Police, Fire, and Ambulance	160	6.4	0.6
Production, Planning, and Expediting Clerks	270	4.1	1.1
Stock Clerks - Stockroom or Warehouse	100	15.7	0.4
Traffic, Shipping and Receiving Clerks	20	13.1	0.1
Other Clerical and Administrative Workers	950	N.A.	3.9
Service Workers	250	N.A.	1.0
Service Supervisors	60	14.6	0.2
Cleaning and Building Service Workers	190	11.0	0.8
Agricultural, Forestry, and Fishery Workers	30	N.A.	0.1
Production and Maintenance Workers	5,730	N.A.	23.4
Mechanic and Repairer Supervisors	400	11.0	1.6
Other Supervisors	80	N.A.	0.3
Precision Inspectors, Testers, and Graders	60	27.3	0.2
Maintenance Repairers, General Utility	50	29.8	0.2
General Office and PBX Installers and Repairers	1,730	4.9	7.0
Frame Wirers	240	9.8	1.0
Other Communications Equipment Mechanics	80	N.A.	0.3
Telephone and Cable Television Line Installers and Repairers	1,730	9.0	7.1
Electrical Powerline Installers and Repairers	260	13.3	1.1
Station Installers and Repairers, Telephone	1,000	8.8	4.1
Other Mechanics, Installers, and Repairers	50	N.A.	0.2
Other Laborers	50	N.A.	0.2

TABLE 6

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Central Office Operators	1,780	7.3
Telephone and Cable TV Line Installers and Repairers	1,730	7.1
General Office Clerks	1,720	7.0
Announcers, Radio and Television	1,500	6.1
Communications, Transportation, and Utilities Managers	1,240	5.1

FIGURE 13

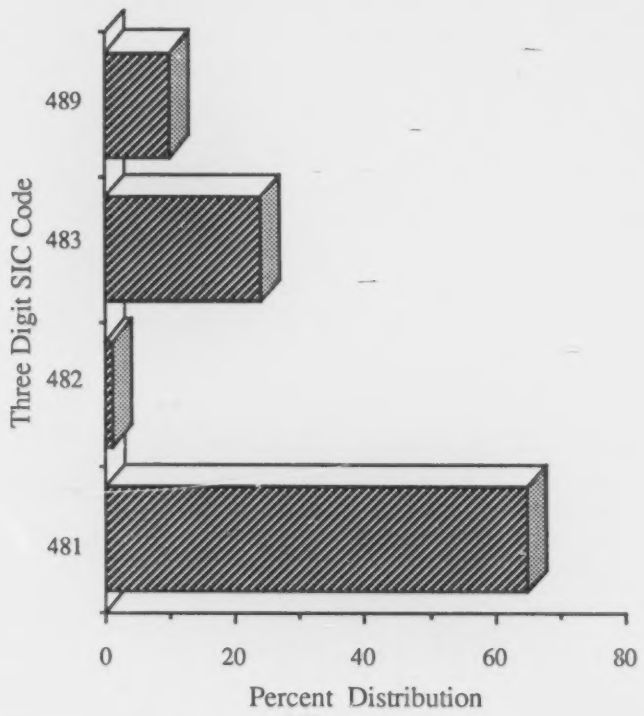


Percent Distribution of Employment by Major Occupational Category

- Clerical Workers (34.0%)
- Maintenance Workers (23.0%)
- Professional and Technical Workers (21.0%)
- Managers and Officers (13.0%)
- Sales Workers (8.0%)
- Service Workers (1.0%)

FIGURE 14

Estimated Employment Distribution by Three Digit SIC Code



SIC 49

ELECTRIC, GAS, AND SANITARY SERVICES

April 1985

This major group includes establishments engaged in the generation, transmission and/or distribution of electricity, steam or combination electric and gas, and other utility services. Water and irrigation systems and sanitary systems engaged in the collection and disposal of garbage, sewage, and other wastes by means of destroying or processing materials, are also included.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	26,430	N.A.	100.0
Managers and Officers	1,500	N.A.	5.6
Financial Managers	70	7.1	0.3
Personnel and Labor Relations Managers	80	6.1	0.3
Marketing, Advertising, and Public Relations Managers	90	11.4	0.3
Administrative Services Managers	130	7.9	0.5
Engineering, Mathematical, and Natural Sciences Managers	100	10.4	0.4
Communications, Transportation, and Utilities Operations Managers	170	11.3	0.6
General Managers and Top Executives	340	7.5	1.3
Other Managers and Administrators	520	N.A.	1.9
Professional and Technical Workers	7,330	N.A.	27.7
Accountants and Auditors	370	3.2	1.4
Budget Analysts	40	4.6	0.2
Other Financial Specialists	60	N.A.	0.2
Purchasing Agents and Buyers, except Farm Products	80	12.0	0.3
Personnel and Labor Relations Specialists	260	4.3	1.0
Other Management Support Workers	100	N.A.	0.4
Civil Engineers	290	6.8	1.1
Electrical and Electronic Engineers	1,150	2.4	4.3
Industrial Engineers	140	5.7	0.5
Safety Engineers	120	5.4	0.4
Mechanical Engineers	170	3.0	0.6
Other Engineers	490	N.A.	1.9
Electrical and Electronic Engineering Technicians and Technologists	780	4.4	2.9
Drafters	560	6.9	2.1

Estimators and Drafters, Utilities	130	9.2	0.5
Surveying and Mapping Technicians and Technologists	40	33.4	0.2
Other Engineering Technicians and Technologists	460	N.A.	1.7
Life Scientists	200	3.2	0.8
Science Technicians and Technologists	290	4.4	1.1
Systems Analysts, EDP	140	3.9	0.5
Computer Programmers	420	3.9	1.6
Farm and Home Management Advisors	30	11.2	0.1
Public Relations Specialists	90	10.3	0.3
Other Professional and Technical Workers	920	N.A.	3.5
Sales Workers	420	N.A.	1.6
Sales Supervisors	30	21.6	0.1
Sales Agents, Selected Business Services	120	8.8	0.4
Salespersons, Retail	40	18.1	0.2
Cashiers	160	17.3	0.6
Other Sales and Related Workers	70	N.A.	0.3
Clerical Workers	6,930	N.A.	26.2
Clerical and Administrative Supervisors	420	5.6	1.6
Adjustment Clerks	100	11.9	0.4
Bill and Account Collectors	130	11.8	0.5
Secretaries	550	3.3	2.1
Stenographers	290	6.4	1.1
Receptionist and Information Clerks	30	20.3	0.1
Typists	80	8.2	0.3
Personnel Clerks	30	10.7	0.1
Customer Service Representatives, Utilities	560	11.6	2.1
Bookkeeping, Accounting, and Auditing Clerks	330	6.2	1.3
Payroll and Timekeeping Clerks	30	9.9	0.1
General Office Clerks	1,790	3.2	6.8
Computer Operators	170	11.5	0.6
Data Entry Keyers	80	7.5	0.3
Other Office Machine Operators	160	N.A.	0.6
Switchboard Operators	40	11.9	0.2
Dispatchers - except Police, Fire and Ambulance	90	13.5	0.3
Meter Readers, Utilities	730	5.9	2.7
Stock Clerks - Stockroom or Warehouse	400	3.7	1.5
Traffic, Shipping, and Receiving Clerks	150	6.7	0.6
Other Clerical and Administrative Workers	770	N.A.	2.9

Service Workers	180	N.A.	0.7
Service Supervisors	20	23.4	0.1
Janitors and Cleaners	130	7.6	0.5
Other Service Workers	30	N.A.	0.1
Agricultural, Forestry, and Fishery Workers	220	N.A.	0.8
Production and Maintenance Workers	9,850	N.A.	37.3
Mechanic and Repairer Supervisors	490	6.8	1.8
Construction Trades Supervisors	60	16.9	0.2
Other Supervisors	180	N.A.	0.7
Other Inspectors and Testers	240	N.A.	0.9
Machinery Maintenance Mechanics, Water or Power Generation Plant	800	5.8	3.0
Other Machinery Maintenance Mechanics	50	N.A.	0.2
Maintenance Repairers, General Utility	340	14.3	1.3
Automotive Mechanics	260	5.8	0.9
Bus, Truck, and Diesel Mechanics	30	3.9	0.1
Power Transformer Repairers	120	8.7	0.5
Powerhouse, Substation, and Relay Electricians	430	6.5	1.6
Electrical Powerline Installers and Repairers	1,890	5.2	7.1
Other Electrical and Electronic Equipment Mechanics, Installers, and Repairers	340	N.A.	1.3
Precision Instrument Repairers	30	21.2	0.1
Electric Meter Installers and Repairers	240	9.7	0.9
Mechanical Control and Valve Installers and Repairers	180	22.1	0.7
Gas Appliance Repairers	150	18.2	0.6
Other Mechanics, Installers, and Repairers	180	N.A.	0.7
Electricians	570	5.2	2.2
Painters and Paperhangers	110	6.2	0.4
Plumbers and Pipefitters	340	9.4	1.3
Pipelaying Fitters	40	12.5	0.2
Pipelayers	70	15.7	0.3
Other Construction Trades Workers	110	N.A.	0.4
Welders and Cutters	210	6.6	0.8
Other Hand Workers	20	N.A.	0.1
Power Generating Plant Operators	310	7.5	1.2
Auxiliary Equipment Operators	180	10.4	0.7
Power Distributors and Dispatchers	400	10.0	1.5
Other Plant and System Operators	230	N.A.	0.9
Truck Drivers, Heavy - inc. Tractor-Trailer	80	29.5	0.3
Truck Drivers, Light - inc. Delivery and Route Workers	80	8.1	0.3

Other Material Moving Equiment Operators	110	N.A.	0.4
Mechanic and Repairer Helpers	180	4.7	0.7
Electrician Helpers	450	12.2	1.7
Other Construction Trades Helpers	80	N.A.	0.3
Refuse Collectors	120	26.9	0.4
Other Laborers	150	N.A.	0.6

TABLE 7

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Electrical Powerline Installers and Repairers	1,890	7.1
General Office Clerks	1,790	6.8
Machinery Maintenance Mechanics, Water or Power Generation Plant	800	3.0
Electrical and Electronic Engineering Technicians and Technologists	780	2.9
Meter Readers, Utilities	730	2.7

FIGURE 15

Percent Distribution of Employment by Major Occupational Category

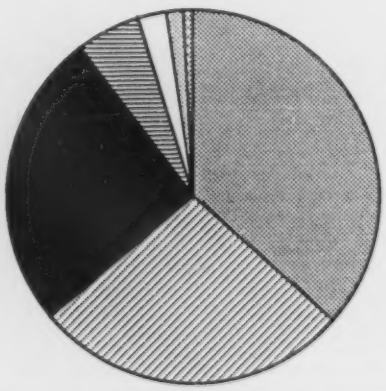
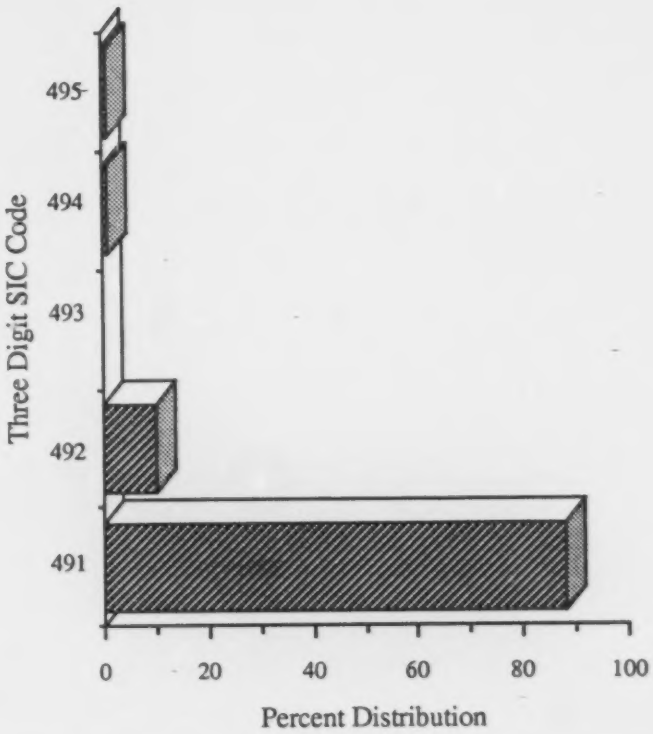

Production and Maintenance Workers (37.3%)
Professional and Technical Workers (27.7%)
Clerical Workers (26.2%)
Managers and Officers (5.6%)
Sales Workers (1.6%)
Agri. , Forestry, and Fishery Workers (0.8%)
Service Workers (0.7%)

FIGURE 16

Estimated Employment Distribution by Three Digit SIC Code



SIC 50

WHOLESALE TRADE - DURABLE GOODS

June 1985

Establishments in this major group are primarily engaged in the wholesale distribution of durable goods. They include motor vehicles and parts, furniture, construction materials, hardware and electrical supplies, and machinery, equipment, and supplies.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	80,540	N.A.	100.0
Managers and Officials	7,800	N.A.	9.7
Financial Managers	80	18.6	0.1
Purchasing Managers	820	10.9	1.0
Marketing, Advertising, and Public Relations Managers	90	31.9	0.1
Communications, Transportation, and Utilities Managers	80	29.2	0.1
General Managers and Top Executives	6,250	4.4	7.8
Other Managers and Administrators	480	N.A.	0.6
Professional and Technical Workers	4,990	N.A.	6.2
Accountants and Auditors	560	14.5	0.7
Wholesale and Retail Buyers, except Farm Products	760	13.3	0.9
Personnel and Labor Relations Specialists	40	35.0	0.1
Other Management Support Workers	240	N.A.	0.3
Mechanical Engineers	90	29.0	0.1
Other Engineers	240	N.A.	0.3
Electrical and Electronic Engineering Technicians and Technologists	1,700	20.1	2.1
Drafters	90	25.8	0.1
Other Engineering Technicians and Technologists	70	N.A.	0.1
Systems Analysts, EDP	370	28.6	0.5
Other Professional and Technical Workers	830	N.A.	1.0
Sales Workers	22,530	N.A.	28.0
Sales Supervisors	1,630	8.6	2.0
Sales Representatives, Scientific - except Retail	5,670	10.3	7.0

Sales Representatives, except Scientific or Retail	7,750	7.4	9.6
Salespersons, Retail	2,360	14.8	2.9
Salespersons, Parts	2,870	7.5	3.6
Stock Clerks, Sales Floor	940	15.0	1.2
Other Sales and Related Workers	1,310	N.A.	1.6
Clerical Workers	20,880	N.A.	25.9
Clerical and Administrative Supervisors	1,490	9.6	1.8
Secretaries	3,130	6.1	3.9
Receptionist and Information Clerks	430	9.3	0.5
Typists	340	19.6	0.4
Typists, Word Processing	90	25.7	0.1
Order Clerks	1,700	12.1	2.1
Bookkeeping, Accounting, and Auditing Clerks	2,710	6.7	3.4
Payroll and Timekeeping Clerks	40	31.4	0.1
Billing, Cost, and Rate Clerks	570	17.3	0.7
General Office Clerks	2,530	7.8	3.1
Billing, Posting, and Calculating Machine Operators	240	16.2	0.3
Computer Operators	380	12.4	0.5
Data Entry Keyers	540	13.2	0.7
Switchboard Operators	240	13.2	0.3
Dispatchers	40	34.4	0.1
Stock Clerks - Stockroom or Warehouse	1,970	14.3	2.5
Order Fillers	1,720	9.6	2.1
Traffic, Shipping, and Receiving Clerks	1,980	8.6	2.4
Other Clerical and Administrative Workers	740	N.A.	0.9
Service Workers	430	N.A.	0.5
Janitors and Cleaners	350	18.2	0.4
Other Service Workers	80	N.A.	0.1
Production and Maintenance Workers	23,830	N.A.	29.6
Mechanic and Repairer Supervisors	900	12.5	1.1
Other Supervisors	200	N.A.	0.2
Production Inspectors, Testers, and Graders	240	31.8	0.3
Maintenance Repairers, General Utility	1,340	22.3	1.7
Automotive Mechanics	440	23.4	0.6
Bus, Truck, and Diesel Mechanics	1,500	32.4	1.8
Mobile Heavy Equipment Mechanics	1,040	31.5	1.3
Data Processing Equipment Repairers	1,620	24.4	2.0
Heating, Air Conditioning, and Refrigeration Mechanics	310	31.6	0.4
Tire Repairers and Changers	150	35.0	0.2

Other Mechanics, Installers, and Repairers	3,640	N.A.	4.5
Glaziers	80	24.8	0.1
Other Construction Trades Workers	480	N.A.	0.6
Other Precision Workers	1,320	N.A.	1.6
Other Machine Setters and Set-Up Operators	80	N.A.	0.1
Other Machine Operators and Tenders	620	N.A.	0.8
Welders and Cutters	470	21.3	0.6
Assemblers and Fabricators	760	33.5	0.9
Other Hand Workers	320	N.A.	0.4
Truck Drivers, Heavy - inc. Tractor-Trailer	1,490	8.4	1.8
Truck Drivers, Light - inc. Delivery and Route Workers	1,830	11.3	2.3
Other Transportation Workers	320	N.A.	0.4
Crane and Tower Operators	220	14.1	0.3
Industrial Truck and Tractor Operators	500	11.0	0.6
Conveyor Operators and Tenders	140	16.4	0.2
Material Movers, Hand	2,120	7.4	2.6
Hand Packers and Packagers	490	15.0	0.6
Other Laborers	1,210	N.A.	1.5

TABLE 7

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Sales Representatives, except Scientific or Retail	7,750	9.6
General Managers and Top Executives	6,250	7.8
Sales Representatives, Scientific - except Retail	5,670	7.0
Secretaries	3,130	3.9
Salespersons, Parts	2,870	3.6

FIGURE 17

Percent Distribution of Employment by Major Occupational Category

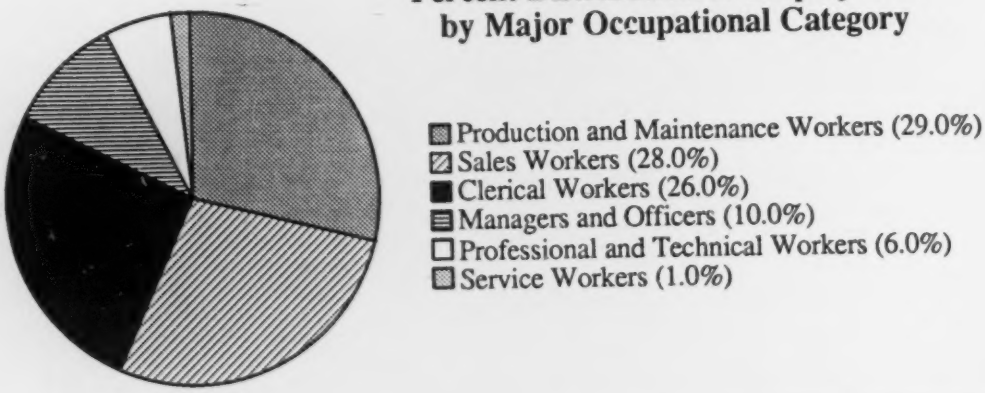
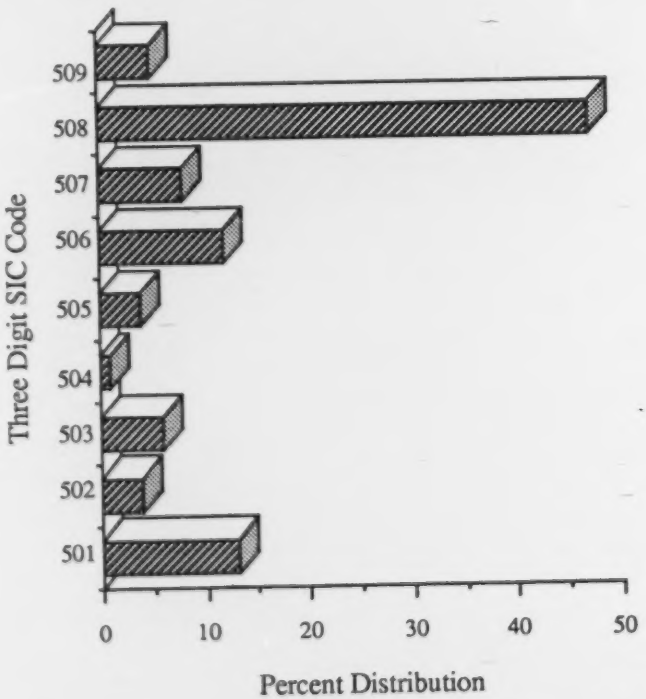


FIGURE 18

Estimated Employment Distribution by Three Digit SIC Code



SIC 51

WHOLESALE TRADE - NONDURABLE GOODS

June 1985

Included in this major group are those establishments engaged in the wholesale distribution of nondurable goods. This classification includes paper, drug supplies, dry goods, farm products, chemicals, petroleum, and alcoholic beverages.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	53,110	N.A.	100.0
Managers and Officers	4,190	N.A.	7.9
Financial Managers	80	11.2	0.1
Personnel and Labor Relations Managers	30	7.5	0.1
Purchasing Managers	420	10.1	0.8
Marketing, Advertising, and Public Relations Managers	110	9.9	0.2
Administrative Services Managers	50	5.9	0.1
Communications, Transportation, and Utilities Operations Managers	140	3.7	0.3
General Managers and Top Executives	3,190	3.1	6.0
Other Managers and Administrators	170	N.A.	0.3
Professional and Technical Workers	1,930	N.A.	3.6
Accountants and Auditors	330	7.8	0.6
Other Financial Specialists	20	N.A.	0.1
Wholesale and Retail Buyers, except Farm Products	500	16.2	0.9
Purchasing Agents and Buyers, except Farm Products	160	23.0	0.3
Personnel and Labor Relations Specialists	40	22.8	0.1
Other Management Support Workers	100	N.A.	0.2
Other Engineers	50	N.A.	0.1
Other Engineering Technicians and Technologists	60	N.A.	0.1
Physical Scientists	40	24.2	0.1
Computer Programmers	160	8.9	0.3
Other Professional and Technical Workers	470	N.A.	0.8
Sales Workers	14,820	N.A.	27.8
Sales Supervisors	1,720	5.8	3.2
Sales Representatives, Scientific - except Retail	2,600	13.2	4.9

Sales Representatives, except Scientific or Retail	7,070	5.1	13.3
Salespersons, Retail	1,370	9.5	2.6
Stock Clerks, Sales Floor	840	8.9	1.6
Cashiers	1,060	7.6	1.9
Other Sales and Related Workers	160	N.A.	0.3
Clerical Workers	12,040	N.A.	22.6
Clerical and Administrative Supervisors	900	5.5	1.7
Adjustment Clerks	60	28.4	0.1
Secretaries	1,640	4.5	3.0
Receptionists and Information Clerks	220	9.9	0.4
Typists	130	18.2	0.2
Correspondence Clerks	30	28.1	0.1
Order Clerks	590	10.6	1.1
Bookkeeping, Accounting, and Auditing Clerks	1,320	4.8	2.5
Payroll and Timekeeping Clerks	30	9.3	0.1
Billing, Cost, and Rate Clerks	210	10.6	0.4
General Office Clerks	1,240	6.1	2.3
Billing, Posting, and Calculating Machine Operators	200	12.3	0.4
Computer Operators	260	7.9	0.5
Data Entry Keyers	360	6.7	0.6
Switchboard Operators	90	10.5	0.2
Dispatchers - except Police, Fire, and Ambulance	40	12.2	0.1
Stock Clerks - Stockroom or Warehouse	1,560	7.7	2.9
Order Fillers, Wholesale and Retail Sales	1,670	7.8	3.2
Traffic, Shipping, and Receiving Clerks	1,220	7.0	2.3
Other Clerical and Administrative Workers	270	N.A.	0.5
Service Workers	660	N.A.	1.3
Service Supervisors	40	15.8	0.1
Guards and Watch Guards	40	25.6	0.1
Bakers, Bread and Pastry	30	25.5	0.1
Butchers and Meat Cutters	110	33.9	0.2
Other Food Service Workers	80	N.A.	0.1
Janitors and Cleaners	340	8.2	0.6
Other Service Workers	20	N.A.	0.1
Agricultural, Forestry, and Fishery Workers	1,390	N.A.	2.6
Production and Maintenance Workers	18,090	N.A.	34.0
Mechanic and Repairer Supervisors	240	9.9	0.5
Other Supervisors	350	N.A.	0.7
Production Inspectors	120	28.8	0.2

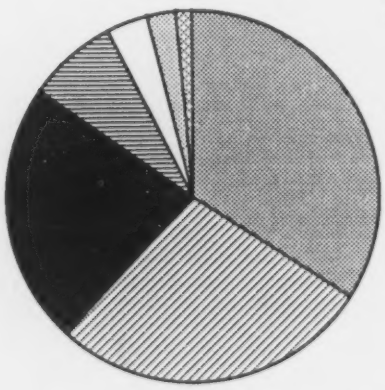
Other Inspectors and Testers	40	N.A.	0.1
Machinery Maintenance Mechanics	80	6.7	0.1
Maintenance Repairers, General Utility	580	9.6	1.1
Automotive Mechanics	90	13.1	0.2
Bus, Truck, and Diesel Mechanics	190	7.8	0.3
Heating, Air Conditioning, and Refrigeration Mechanics	110	15.7	0.2
Coin and Vending Machine Servicers and Repairers	40	30.4	0.1
Tire Repairers and Changers	50	28.8	0.1
Other Mechanics, Installers, and Repairers	70	N.A.	0.1
Other Construction Trades Workers	20	N.A.	0.1
Machinists	100	22.3	0.2
Other Precision Workers	40	N.A.	0.1
Sewing Machine Operators, Garment	290	20.5	0.5
Packaging and Filling Machine Operators and Tenders	320	29.4	0.6
Other Machine Setters and Set-Up Operators	110	N.A.	0.2
Other Machine Operators and Tenders	530	N.A.	1.0
Welders and Cutters	90	28.9	0.2
Other Hand Workers	570	N.A.	1.1
Truck Drivers, Heavy - inc. Tractor-Trailer	3,080	4.1	5.8
Truck Drivers, Light - inc. Delivery and Route Workers	3,580	5.9	6.7
Drivers / Sales Workers	1,980	8.9	3.7
Service Station Attendants	590	4.5	1.1
Industrial Truck and Tractor Operators	680	7.7	1.3
Conveyor Operators and Tenders	120	24.4	0.2
Other Material Moving Equipment Operators	120	N.A.	0.2
Material Movers, Hand	2,120	7.2	3.9
Hand Packers and Packagers	1,090	11.6	2.0
Other Laborers	700	N.A.	1.3

TABLE 9

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Sales Representatives, except Scientific or Retail	7,070	13.3
Truck Drivers, Light, inc. Delivery and Route Workers	3,580	6.7
General Managers and Top Executives	3,190	6.0
Truck Drivers, Heavy, inc. Tractor-Trailer	3,080	5.8
Sales Representatives, Scientific - except Retail	2,600	4.9

FIGURE 19

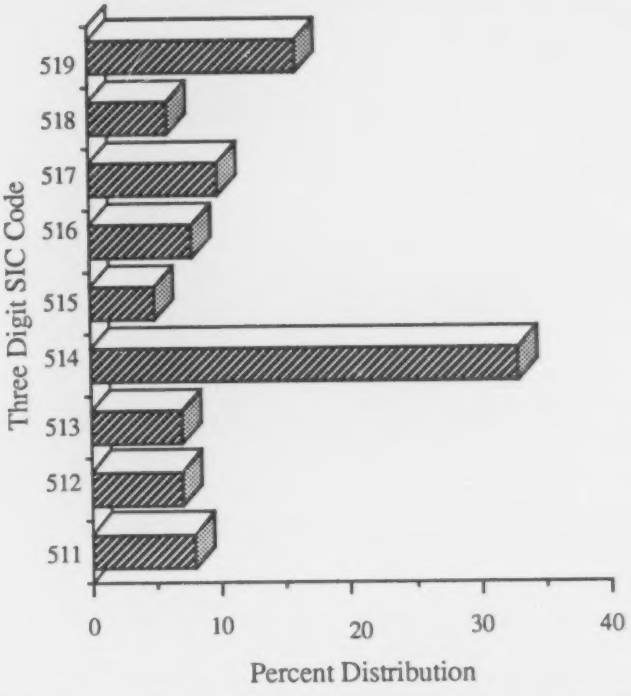


Percent Distribution of Employment by Major Occupational Category

- Production and Maintenance Workers (34.0%)
- Sales Workers (27.8%)
- Clerical Workers (22.6%)
- Managers and Officers (7.9%)
- Professional and Technical Workers (3.6%)
- Agri., Forestry, and Fishery Workers (2.6%)
- Service Workers (1.3%)

FIGURE 20

Estimated Employment Distribution by Three Digit SIC Code



SIC 52

BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY, AND MOBILE HOME DEALERS

June 1985

This major group includes establishments primarily engaged in selling lumber and other building material, paint, glass, wallpaper, hardware, garden supplies, and mobile homes. Establishments whose sales are mostly to contractors are considered "retail" and are included in this group.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	23,320	N.A.	100.0
Managers and Officers	2,620	N.A.	11.2
Financial Managers	20	11.8	0.1
Personnel and Labor Relations Managers	20	9.2	0.1
Purchasing Managers	370	8.5	1.6
Marketing, Advertising, and Public Relations Managers	60	4.7	0.2
Communications, Transportation, and Utilities Operations Managers	30	7.7	0.1
General Managers and Top Executives	2,000	3.4	8.6
Other Managers and Administrators	120	N.A.	0.5
Professional and Technical Workers	990	N.A.	4.2
Accountants and Auditors	170	8.8	0.7
Wholesale and Retail Buyers, except Farm Products	390	8.8	1.7
Drafters	40	34.1	0.2
Computer Programmers	50	2.9	0.2
Designers	40	20.9	0.1
Other Professional and Technical Workers	300	N.A.	1.3
Sales Workers	7,920	N.A.	34.0
Sales Supervisors	50	26.6	0.2
Sales Representatives, except Scientific or Retail	280	11.7	1.2
Salespersons, Retail	5,720	3.2	24.5
Counter and Rental Clerks	90	22.7	0.4
Stock Clerks, Sales Floor	960	10.2	4.1
Cashiers	790	13.4	3.4
Other Sales and Related Workers	30	N.A.	0.1
Clerical Workers	4,580	N.A.	19.6
Clerical and Administrative Supervisors	50	10.0	0.2

Secretaries	580	7.9	2.5
Bookkeeping, Accounting, and Auditing Clerks	880	5.2	3.8
Billing, Cost, and Rate Clerks	70	17.8	0.3
General Office Clerks	740	5.9	3.1
Computer Operators	90	17.0	0.4
Other Office Machine Operators	20	N.A.	0.1
Stock Clerks - Stockroom or Warehouse	1,530	6.2	6.5
Traffic, Shipping, and Receiving Clerks	360	10.9	1.6
Other Clerical and Administrative Workers	260	N.A.	1.1
Service Workers	200	N.A.	0.9
Guards and Watch Guards	40	8.0	0.2
Janitors and Cleaners	140	13.5	0.6
Other Service Workers	20	N.A.	0.1
Agricultural, Forestry, and Fishery Workers	400	N.A.	1.7
Nursery Workers	290	10.9	1.2
Gardeners and Groundskeepers	110	16.4	0.5
Production and Maintenance Workers	6,580	N.A.	28.2
Mechanic and Repairer Supervisors	210	17.7	0.9
Other Supervisors	70	N.A.	0.3
Maintenance Repairers, General Utility	290	11.7	1.2
Automotive Mechanics	30	30.9	0.1
Small Engine Specialists	300	9.6	1.3
Electric Home Appliance and Power Tool Repairers	50	7.4	0.2
Installers and Repairers - Mobile Homes and Trailers	550	11.2	2.4
Other Mechanics, Installers, and Repairers	50	N.A.	0.2
Carpenters	250	30.8	1.1
Painters and Paperhangers	50	34.5	0.2
Glaziers	390	10.6	1.7
Other Construction Trades Workers	30	N.A.	0.1
Wood Machinists	530	22.4	2.3
Other Machine Operators	50	N.A.	0.2
Assemblers and Fabricators	320	20.9	1.4
Truck Drivers, Heavy - inc. Tractor-Trailer	640	19.0	2.7
Truck Drivers, Light - inc. Delivery and Route Workers	1,700	7.0	7.3
Industrial Truck and Tractor Operators	180	17.5	0.8
Other Laborers	890	N.A.	3.8

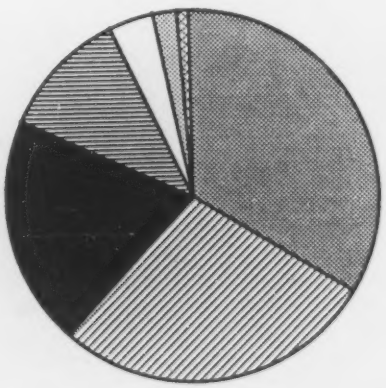
TABLE 10

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Salespersons, Retail	5,720	24.5
General Managers and Top Executives	2,000	8.6
Truck Drivers, Light - inc. Delivery and Route Workers	1,700	7.3
Stock Clerks - Stockroom or Warehouse	1,530	6.5
Stock Clerks, Sales Floor	960	4.1

FIGURE 21

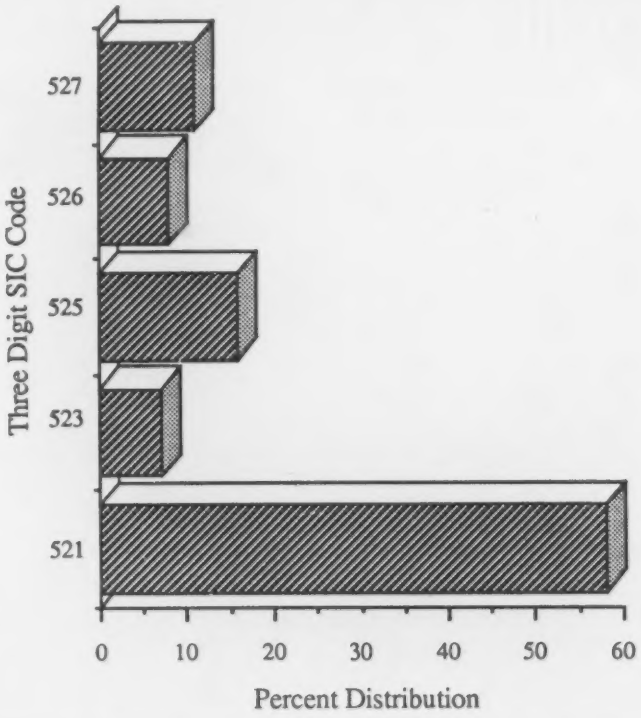
Percent Distribution of Employment by Major Occupational Category



- Sales Workers (34.0%)
- Production and Maintenance Workers (28.0%)
- Clerical Workers (20 %)
- Managers and Officers (11.0%)
- Professional and Technical Workers (4.0%)
- Agri., Forestry, and Fishery Workers (2.0%)
- Service Workers (1.0%)

FIGURE 22

Estimated Employment Distribution by Three Digit SIC Code



SIC 53

GENERAL MERCHANDISE STORES

June 1985

This category includes retail stores commonly known as department and variety stores, general stores, and et cetera. Establishments in this major group include stores which sell a variety of merchandise such as dry goods, apparel, small wares, and others.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	56,530	N.A.	100.0
Managers and Officers	3,510	N.A.	6.2
Financial Managers	30	28.6	0.1
Personnel and Labor Relation Managers	90	17.0	0.2
Purchasing Managers	300	15.1	0.5
Marketing, Advertising, and Public Relations Managers	280	17.9	0.5
Communications, Transportation, and Utilities Operations Managers	70	19.5	0.1
General Managers and Top Executives	2,290	5.3	4.0
Other Managers and Administrators	450	N.A.	0.8
Professional and Technical Workers	1,870	N.A.	3.0
Accountants and Auditors	120	31.2	0.2
Wholesale and Retail Buyers, except Farm Products	490	21.0	0.8
Personnel and Labor Relations Specialists	160	15.9	0.2
Computer Programmers	50	25.7	0.1
Artists and Related Workers	60	22.6	0.1
Interior Designers	60	32.6	0.1
Merchandise Displayers and Window Trimmers	470	24.1	0.8
Other Professional and Technical Workers	460	N.A.	0.8
Sales Workers	36,040	N.A.	63.7
Sales Supervisors	1,760	10.3	3.1
Salespersons, Retail	23,020	5.4	40.7
Stock Clerks, Sales Floor	4,050	15.5	7.2
Cashiers	5,900	10.7	10.4
News Vendors and Related Workers	290	22.5	0.5
Other Sales and Related Workers	1,020	N.A.	1.8

Clerical Workers	9,730	N.A.	17.2
Clerical and Administrative Supervisors	390	12.4	0.7
Credit Authorizers	140	17.2	0.2
Adjustment Clerks	880	11.8	1.6
Bill and Account Collectors	130	27.3	0.2
Secretaries	480	21.9	0.9
Typists	30	33.8	0.1
Personnel Clerks	60	25.0	0.1
Order Clerks	480	19.3	0.9
Bookkeeping, Accounting, and Auditing Clerks	1,000	11.7	1.8
Payroll and Timekeeping Clerks	70	22.2	0.1
General Office Clerks	1,350	15.4	2.4
Billing, Posting, and Calculating Machine Operators	50	31.9	0.1
Computer Operators	100	22.8	0.2
Data Entry Keyers	130	26.8	0.2
Other Office Machine Operators	80	N.A.	0.1
Switchboard Operators	330	13.7	0.6
Dispatchers - except Police, Fire, and Ambulance	150	24.1	0.2
Marking Clerks	960	13.5	1.7
Stock Clerks - Stockroom or Warehouse	1,490	12.5	2.6
Traffic, Shipping, and Receiving Clerks	840	14.6	1.5
Other Clerical and Administrative Workers	590	N.A.	1.0
Service Workers	2,780	N.A.	4.9
Service Supervisors	80	26.9	0.1
Detectives and Investigators, except Public	320	22.2	0.6
Guards and Watch Guards	350	16.6	0.6
Waiters and Waitresses	270	34.3	0.5
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	340	24.3	0.6
Cooks, Short Order	90	34.6	0.2
Food Preparation Workers	80	31.1	0.1
Other Food Service Workers	210	N.A.	0.3
Janitors and Cleaners	780	10.3	1.4
Other Cleaning and Building Service Workers	50	N.A.	0.1
Other Service Workers	210	N.A.	0.3
Agricultural, Forestry, and Fishery Workers	80	N.A.	0.1
Production and Maintenance Workers	2,520	N.A.	4.5
Mechanic and Repairer Supervisors	60	19.7	0.1

Maintenance Repairers, General Utility	220	19.5	0.4
Automotive Mechanics	370	17.1	0.6
Electric Home Appliance and Power Tool Repairers	440	22.4	0.8
Other Mechanics, Installers, and Repairers	230	N.A.	0.4
Custom Tailors and Sewers	380	22.8	0.7
Other Precision Workers	30	N.A.	0.1
Other Machine Operators and Tenders	20	N.A.	0.1
Truck Drivers, Heavy - inc. Tractor-Trailer	240	31.1	0.4
Truck Drivers, Light - inc. Delivery and Route Workers	60	27.3	0.1
Industrial Truck and Tractor Operators	70	28.1	0.1
Material Movers, Hand	180	16.8	0.3
Other Laborers	220	N.A.	0.4

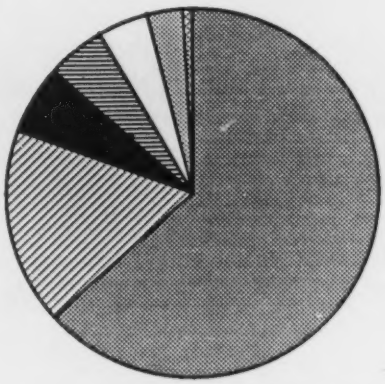
TABLE 11

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Salespersons, Retail	23,020	40.7
Cashiers	5,900	10.4
Stock Clerks, Sales Floor	4,050	7.2
General Managers and Top Executives	2,290	4.0
Sales Supervisors	1,760	3.1

FIGURE 23

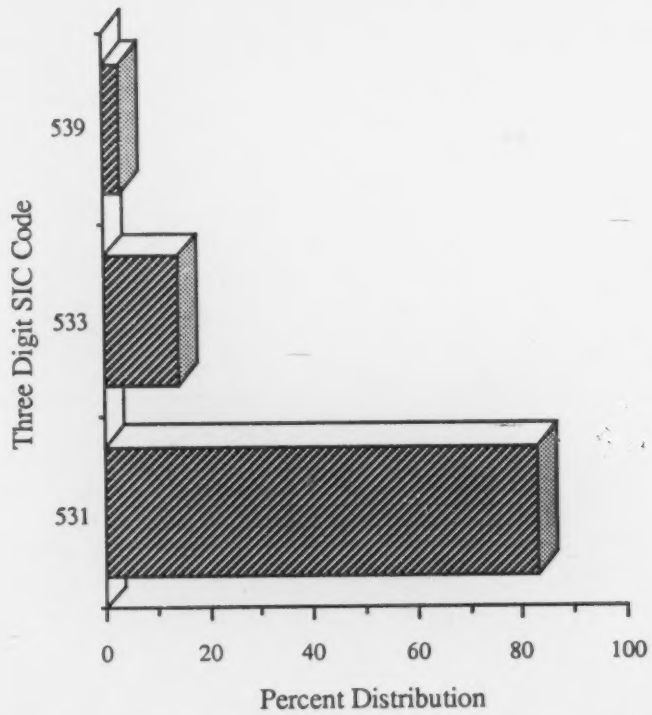
Percent Distribution of Employment by Major Occupational Category



- Sales Workers (63.7%)
- Clerical Workers (17.2%)
- Managers and Officers (6.2%)
- Service Workers (4.9%)
- Production and Maintenance Workers (4.5%)
- Professional and Technical Workers (3.0%)
- Agri., Forestry, and Fishery Workers (0.1%)

FIGURE 24

Estimated Employment Distribution by Three Digit SIC Code



SIC 54

FOOD STORES

June 1985

This major group includes retail stores primarily engaged in selling food for home preparation and consumption. Establishments primarily engaged in selling prepared foods and drinks for consumption on the premises are classified in Major Group 58, and stores primarily engaged in selling packaged beers and liquors are in Industry 5921.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	74,600	N.A.	100.0
Managers and Officers	6,090	N.A.	8.2
Purchasing Managers	750	26.5	1.0
Marketing, Advertising, and Public Relations Managers	50	13.0	0.1
General Managers and Top Executives	4,770	9.8	6.4
Other Managers and Administrators	520	N.A.	0.9
Professional and Technical Workers	1,645	N.A.	2.2
Purchasing Agents and Buyers, except Farm Products	740	27.2	1.0
Pharmacists	80	34.4	0.1
Other Professional and Technical Workers	825	N.A.	1.1
Sales Workers	42,650	N.A.	57.2
Sales Supervisors	1,960	13.8	2.6
Sales Representatives, except Scientific or Retail	150	13.6	0.2
Salespersons, Retail	7,180	16.0	9.6
Stock Clerks, Sales Floor	12,110	9.5	16.2
Cashiers	20,200	6.7	27.1
News Vendors and Related Workers	190	0.0	0.2
Other Sales and Related Workers	870	N.A.	1.2
Clerical Workers	5,400	N.A.	7.2
Secretaries	490	28.1	0.7
Order Clerks	105	15.4	0.1
Bookkeeping, Accounting, and Auditing Clerks	1,710	15.5	2.3
Payroll and Timekeeping Clerks	60	21.0	0.1
Billing, Cost, and Rate Clerks	60	22.4	0.1
General Office Clerks	480	30.2	0.6

Data Entry Keyers	40	12.0	0.1
Stock Clerks - Stockroom or Warehouse	1,710	24.2	2.3
Order Fillers, Wholesale and Retail Sales	125	15.0	0.2
Traffic, Shipping, and Receiving Clerks	270	30.8	0.4
Other Clerical and Administrative Workers	350	N.A.	0.5
Service Workers	10,550	N.A.	14.1
Service Supervisors	160	14.6	0.2
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	520	28.8	0.7
Bakers, Bread and Pastry	730	13.2	1.0
Butchers and Meat Cutters	3,480	10.2	4.7
Food Preparation Workers	2,270	16.1	3.0
Combination Food Preparation and Service Workers	1,100	32.9	1.5
Other Food Service Workers	1,840	N.A.	2.5
Janitors and Cleaners	300	33.0	0.4
Other Service Workers	150	N.A.	0.2
Production and Maintenance Workers	8,520	N.A.	11.4
Other Supervisors	100	14.0	0.1
Maintenance Repairers, General Utility	150	19.3	0.2
Bus, Truck, and Diesel Mechanics	50	6.6	0.1
Other Mechanics, Installers, and Repairers	120	N.A.	0.2
Packaging and Filling Machine Operators and Tenders	90	0.0	0.1
Truck Drivers, Heavy - inc. Tractor-Trailer	770	N.A.	1.0
Truck Drivers, Light - inc. Delivery and Route Workers	140	22.8	0.2
Drivers / Sales Workers	160	21.2	0.2
Industrial Truck and Tractor Operators	240	6.7	0.3
Material Movers, Hand	5,550	11.4	7.4
Hand Packers and Packagers	880	23.3	1.2
Other Laborers	270	N.A.	0.4

TABLE 12

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Cashiers	20,200	27.1
Stock Clerks, Sales Floor	12,110	16.2
Salespersons, Retail	7,180	9.6
Material Movers, Hand	5,550	7.4
General Managers and Top Executives	4,770	6.4

FIGURE 25

Percent Distribution of Employment by Major Occupational Category

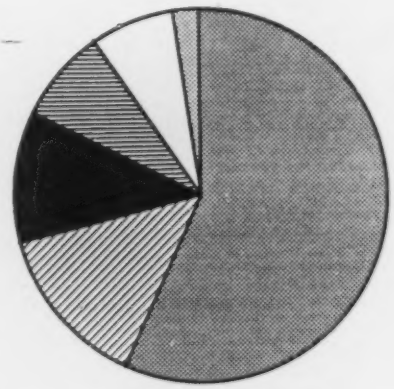
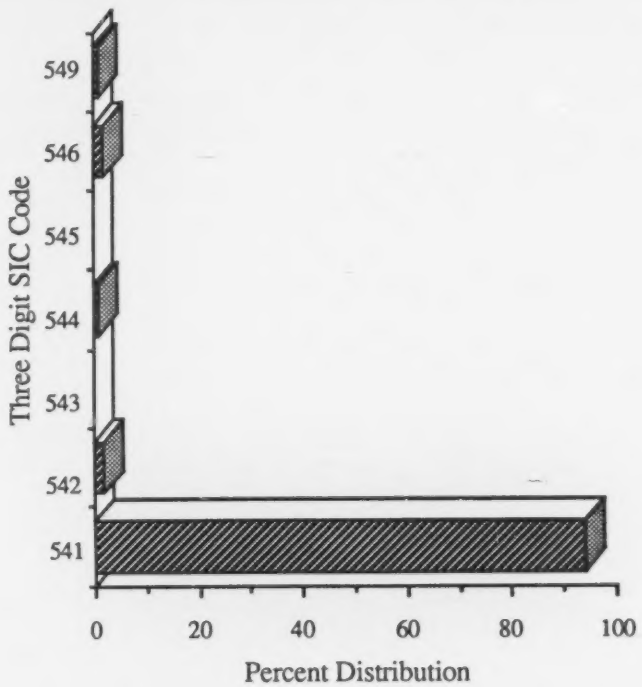


FIGURE 26

Estimated Employment Distribution by Three Digit SIC Code



SIC 55

AUTOMOTIVE DEALERS AND GASOLINE SERVICE STATIONS

June 1985

This major group includes establishments selling new, used, or new and used automobiles and recreation equipment, gasoline stations, and motorcycle dealers. Boat and utility trailer dealers are also included.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	47,990	N.A.	100.0
Managers and Officers	4,310	N.A.	9.0
Marketing, Advertising, and Public Relations Managers	1,050	16.5	2.2
General Managers and Top Executives	3,100	6.0	6.5
Other Managers and Administrators	160	N.A.	0.3
Professional and Technical Workers	440	N.A.	0.9
Accountants and Auditors	380	19.2	0.8
Other Professional and Technical Workers	60	N.A.	0.1
Sales Workers	14,790	N.A.	30.9
Sales Supervisors	430	29.0	0.9
Salespersons, Retail	7,140	5.3	14.9
Salespersons, Parts	3,640	8.7	7.6
Cashiers	3,150	7.5	6.6
Other Sales and Related Workers	430	N.A.	0.9
Clerical Workers	6,540	N.A.	13.6
Clerical and Administrative Supervisors	1,390	12.4	2.9
Secretaries	820	13.9	1.7
Bookkeeping, Accounting, and Auditing Clerks	2,140	7.3	4.5
Billing, Cost, and Rate Clerks	290	22.8	0.6
General Office Clerks	950	11.6	2.0
Stock Clerks - Stockroom or Warehouse	410	19.2	0.8
Other Clerical and Administrative Workers	540	N.A.	1.1
Service Workers	810	N.A.	1.7
Waiters and Waitresses	190	22.3	0.4
Cooks, Restaurant	40	24.2	0.1
Cooks, Short Order	120	27.0	0.2
Janitors and Cleaners	330	19.4	0.7

Other Service Workers	130	N.A.	0.3
Agri., Forestry, and Fishery Workers	30	N.A.	0.1
Production and Maintenance Workers	21,020	N.A.	43.8
Mechanic and Repair Supervisors	1,530	10.6	3.2
Maintenance Repairers, General Utility	240	31.5	0.5
Automotive Mechanics	7,420	4.8	15.5
Auto Body and Related Repairers	1,600	11.4	3.3
Bus, Truck, and Diesel Mechanics	240	30.1	0.5
Installers and Repairers, Manufactured Buildings, Mobile Homes, and Travel Trailers	60	31.0	0.1
Tire Repairers and Changers	2,330	11.5	4.9
Other Mechanics, Installers, and Repairers	560	N.A.	1.2
Other Machine Operators	250	N.A.	0.5
Truck Drivers, Heavy - inc. Tractor-Trailer	170	22.2	0.4
Truck Drivers, Light - inc. Delivery and Route Workers	410	29.4	0.9
Service Station Attendants	2,740	7.4	5.7
Other Transportation Workers	70	N.A.	0.2
Mechanic and Repair Helpers	1,440	16.1	3.0
Vehicle Washers and Equipment Cleaners	1,670	10.1	3.5
Other Laborers	250	N.A.	0.5

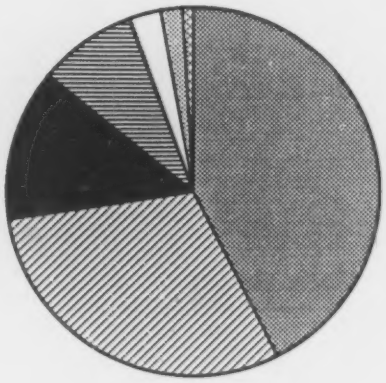
TABLE 13

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Automotive Mechanics	7,420	15.5
Salespersons, Retail	7,140	14.9
Salespersons, Parts	3,640	7.6
Cashiers	3,150	6.6
General Managers and Top Executives	3,100	6.5

FIGURE 27

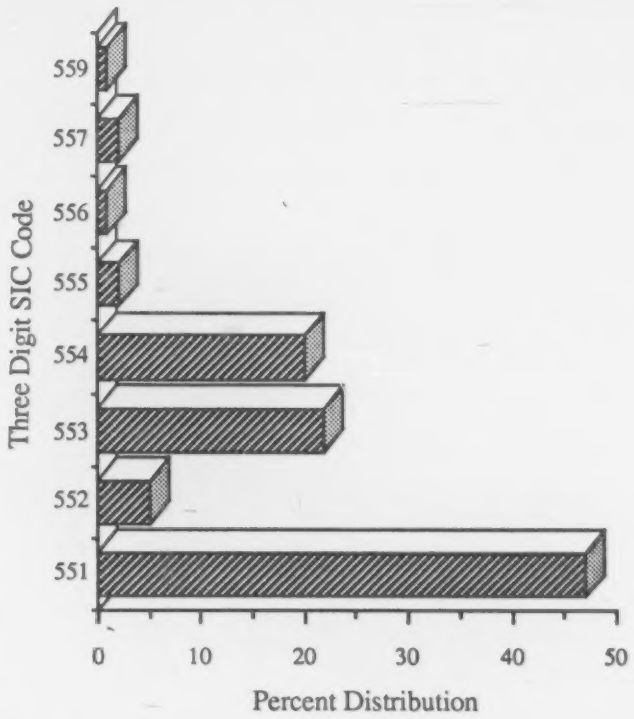
Percent Distribution of Employment by Major Occupational Category



- Production and Maintenance Workers (43.8%)
- Sales Workers (30.9%)
- Clerical Workers (13.6%)
- Managers and Officers (9.0%)
- Service Workers (1.7%)
- Professional and Technical Workers (0.9%)
- Agri., Forestry, and Fishery Workers (0.1%)

FIGURE 28

Estimated Employment Distribution by Three Digit SIC Code



SIC 56

APPAREL AND ACCESSORY STORES

June 1985

This major group includes retail establishments primarily engaged in selling new clothing, shoes, hats, and other articles for personal wear. Furriers and custom tailors that have inventory on hand are included in this group.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	23,690	N.A.	100.0
Managers and Officials	3,240	N.A.	13.7
Purchasing Managers	140	20.3	0.6
General Managers and Top Executives	3,040	4.9	12.8
Other Managers and Administrators	60	N.A.	0.3
Professional and Technical Workers	440	N.A.	1.8
Accountants and Auditors	70	24.9	0.3
Wholesale and Retail Buyers, except Farm Products	240	16.2	1.0
Other Professional and Technical Workers	130	N.A.	0.5
Sales Workers	17,030	N.A.	71.8
Sales Supervisors	670	10.9	2.8
Salespersons, Retail	14,680	2.3	61.9
Stock Clerks, Sales Floor	680	13.5	2.9
Cashiers	850	13.1	3.6
Other Sales and Related Workers	150	N.A.	0.6
Clerical Workers	1,540	N.A.	6.5
Clerical and Administrative Supervisors	170	20.3	0.7
Bill and Account Collectors	60	33.4	0.3
Secretaries	80	22.3	0.3
Bookkeeping, Accounting, and Auditing Clerks	350	13.5	1.5
General Office Clerks	190	20.2	0.8
Marking Clerks	160	26.7	0.7
Stock Clerks - Stockroom or Warehouse	200	15.5	0.8
Traffic, Shipping and Receiving Clerks	130	25.1	0.5
Other Clerical and Administrative Workers	200	N.A.	0.8
Service Workers	270	N.A.	1.2
Detectives and Watch Guards	20	25.6	0.1

Janitors and Cleaners	140	17.3	0.6
Other Service Workers	110	N.A.	0.5
Production and Maintenance Workers	1,170	N.A.	4.9
Other Mechanics, Installers, and Repairers	40	N.A.	0.2
Custom Tailors and Sewers	610	31.3	2.5
Other Machine Operators and Tenders	400	N.A.	1.7
Other Hand Workers	30	N.A.	0.1
Truck Drivers, Light - inc. Delivery and Route Workers	30	14.8	0.1
Material Movers, Hand	20	23.8	0.1
Other Laborers	40	N.A.	0.2

TABLE 14

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Salespersons, Retail	14,680	61.9
General Managers and Top Executives	3,040	12.8
Cashiers	850	3.6
Stock Clerks, Sales Floor	680	2.9
Sales Supervisors	670	2.8

FIGURE 29

Percent Distribution of Employment by Major Occupational Category

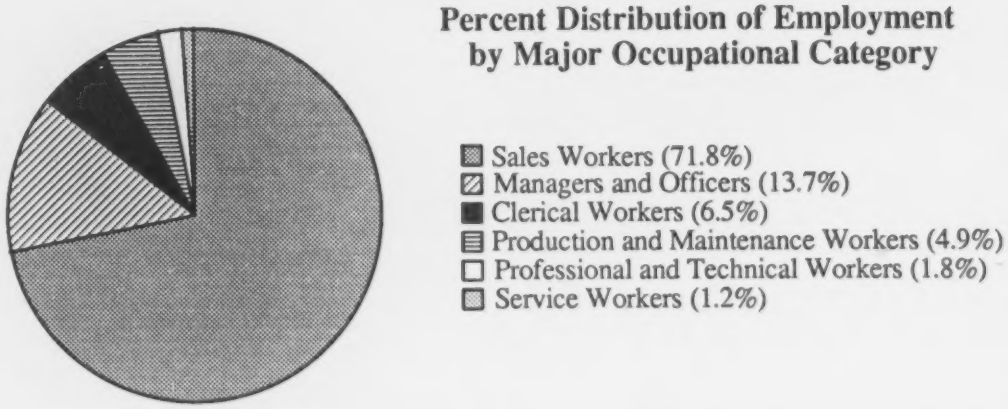
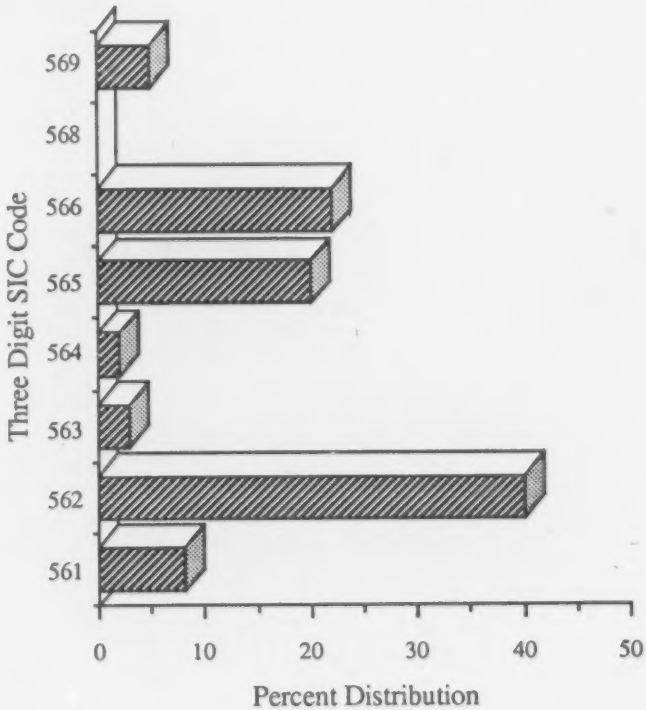


FIGURE 30

Estimated Employment Distribution by Three Digit SIC Code



SIC 57

FURNITURE, HOME FURNISHINGS, AND EQUIPMENT STORES

June 1985

Establishments in this group are primarily retail stores selling home furnishings such as furniture, draperies, electrical and gas appliances. Antique and used furniture dealers are not included in this group.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	22,740	N.A.	100.0
Managers and Officers	3,030	N.A.	13.3
Purchasing Managers	220	16.1	1.0
Marketing, Advertising, and Public Relations Managers	30	25.8	0.1
General Managers and Top Executives	2,690	3.6	11.8
Other Managers and Administrators	90	N.A.	0.4
Professional and Technical Workers	860	N.A.	3.8
Accountants and Auditors	80	28.3	0.3
Purchasing Agents and Buyers, except Farm Products	180	18.6	0.8
Other Management Support Workers	80	N.A.	0.3
Designers	50	34.2	0.2
Interior Designers	340	20.3	1.5
Other Professional and Technical Workers	130	N.A.	0.6
Sales Workers	8,170	N.A.	35.9
Sales Supervisors	70	19.7	0.3
Sales Representatives, except Scientific or Retail	140	14.6	0.6
Salespersons, Retail	5,900	3.7	26.0
Salespersons, Parts	210	0.0	0.9
Stock Clerks, Sales Floor	670	15.3	3.0
Cashiers	930	14.1	4.1
Other Sales and Related Workers	250	N.A.	1.1
Clerical Workers	4,990	N.A.	21.9
Clerical and Administrative Supervisors	610	9.9	2.7
Bill and Account Collectors	610	7.0	2.7
Secretaries	780	6.9	3.4
Receptionists and Information Clerks	100	21.6	0.4
Bookkeeping, Accounting, and Auditing Clerks	890	7.3	3.9

General Office Clerks	720	8.9	3.2
Billing, Cost, and Rate Clerks	40	27.1	0.2
Stock Clerks - Stockroom or Warehouse	810	8.8	3.6
Traffic, Shipping, and Receiving Clerks	280	17.3	1.2
Other Clerical and Administrative Workers	150	N.A.	0.7
Service Workers	230	N.A.	1.0
Janitors and Cleaners	150	14.8	0.7
Other Service Workers	80	N.A.	0.3
Production and Maintenance Workers	5,290	N.A.	23.3
Mechanic and Repairer Supervisors	100	22.3	0.4
Maintenance Repairers, General Utility	110	26.0	0.5
Home Entertainment Equipment Repairers	520	14.1	2.3
Electric Appliance and Tool Repairers	580	6.7	2.6
Heating, Air Conditioning, and Refrigeration Mechanics	160	18.1	0.7
Other Mechanics, Installers, and Repairers	160	N.A.	0.7
Carpet Installers	270	28.1	1.2
Other Construction Trades Workers	140	N.A.	0.6
Cabinetmakers and Related Workers	790	22.8	3.5
Other Precision Workers	180	N.A.	0.8
Sewing Machine Operators, Non-Garment	200	34.7	0.9
Assemblers and Fabricators, Non-Precision	110	34.7	0.5
Truck Drivers, Heavy - inc. Tractor-Trailer	140	31.2	0.6
Truck Drivers, Light - inc. Delivery and Route Workers	1,510	7.7	6.6
Material Movers, Hand	420	15.6	1.8
Other Laborers	80	N.A.	0.3

TABLE 15

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Salespersons, Retail	5,900	26.0
General Managers and Top Executives	2,690	11.8
Truck Drivers, Light - inc. Delivery and Route Workers	1,510	6.6
Cashiers	930	4.1
Stock Clerks - Stockroom or Warehouse	810	3.6

FIGURE 31

Percent Distribution of Employment by Major Occupational Category

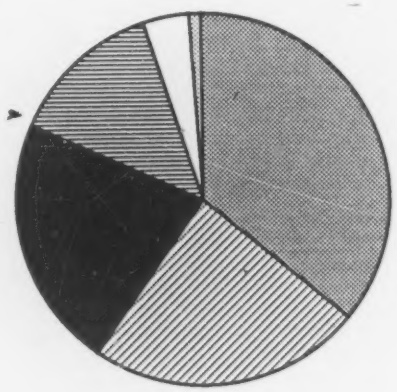
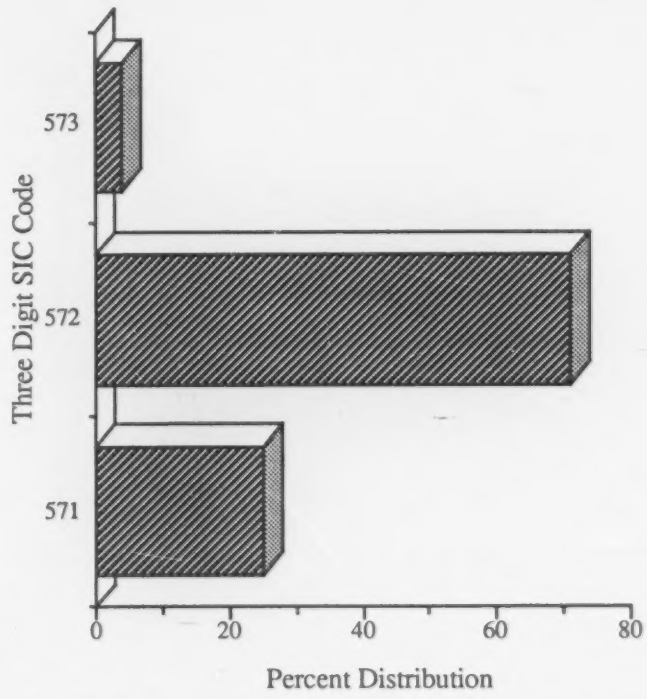


FIGURE 32

Estimated Employment Distribution by Three digit SIC Code



SIC 58

EATING AND DRINKING PLACES
June 1985

The establishments in this major grouping are primarily engaged in the retail selling of food and drinks for on the premises consumption. Establishments that are operated as a subordinate service facility of another industry are not included.

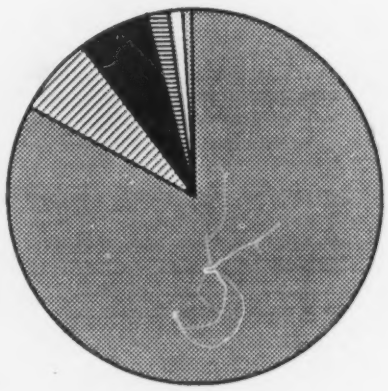
Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	144,250	N.A.	100.0
Managers and Officers	9,640	N.A.	6.7
Food Service and Lodging Managers	5,480	12.6	3.8
General Managers and Top Executives	3,510	17.0	2.4
Other Managers and Administrators	650	N.A.	0.5
Professional and Technical Workers	390	N.A.	0.2
Sales Workers	9,360	N.A.	6.5
Cashiers	9,180	N.A.	6.4
Other Sales and Related Workers	180	N.A.	0.1
Clerical Workers	2,670	N.A.	1.8
Secretaries	450	28.7	0.3
Bookkeeping, Accounting, and Auditing Clerks	800	28.3	0.5
Other Clerical and Administrative Workers	1,420	N.A.	1.0
Service Workers	121,110	N.A.	83.7
Service Supervisors	3,810	17.5	2.6
Hosts and Hostesses	2,650	16.2	1.8
Bartenders	2,010	29.3	1.4
Waiters and Waitresses	30,780	9.9	21.3
Dining Room and Cafeteria Attendants	6,840	21.3	4.8
Cooks, Restaurant	8,280	14.6	5.7
Cooks, Specialty Fast Food	15,480	15.7	10.7
Cooks, Short Order	3,430	31.0	2.4
Food Preparation Workers	9,560	16.7	6.6
Combination Food Preparation and Service Workers	29,880	13.8	20.7
Other Food Service Workers	6,640	N.A.	4.6
Janitors and Cleaners	1,270	25.1	0.9
Other Service Workers	480	N.A.	0.3
Production and Maintenance Workers	1,100	N.A.	0.8

TABLE 16

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Waiters and Waitresses	30,780	21.3
Cooks, Specialty Fast Food	15,480	10.7
Food Preparation Workers	9,560	6.6
Cashiers	9,180	6.4
Cooks, Restaurant	8,280	5.7

FIGURE 33



Percent Distribution of Employment by Major Occupational Category

- Service Workers (83.0%)
- Managers and Officers (7.0%)
- Sales Workers (6.0%)
- Clerical Workers (2.0%)
- Professional and Technical Workers (1.0%)
- Production and Maintenance Workers (1.0%)

SIC 59

MISCELLANEOUS RETAIL

June 1985

This major group includes establishments not previously classified. Drug and liquor stores, florists, cigar stores, and fuel and ice dealers are included within this classification.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	57,420	N.A.	100.0
Managers and Officers	5,140	N.A.	9.0
Financial Managers	60	12.6	0.1
Purchasing Managers	460	11.4	0.8
General Managers and Top Executives	4,250	3.7	7.4
Other Managers and Administrators	370	N.A.	0.6
Professional and Technical Workers	5,280	N.A.	9.2
Accountants and Auditors	200	14.5	0.3
Wholesale and Retail Buyers, except Farm Products	410	13.8	0.7
Other Management Support Workers	100	N.A.	0.2
Pharmacists	2,920	6.6	5.1
Designers	1,250	11.6	2.2
Other Professional and Technical Workers	400	N.A.	0.7
Sales Workers	25,700	N.A.	44.8
Sales Supervisors	1,740	7.4	3.0
Sales Representatives, except Scientific or Retail	300	25.2	0.5
Salespersons, Retail	15,440	3.8	26.9
Salespersons, Parts	40	29.6	0.1
Stock Clerks, Sales Floor	3,560	11.0	6.2
Cashiers	3,940	8.1	6.9
Other Sales and Related Workers	680	N.A.	1.2
Clerical Workers	7,770	N.A.	13.5
Clerical and Administrative Supervisors	180	13.1	0.3
Adjustment Clerks	260	3.1	0.4
Secretaries	700	9.6	1.2
Receptionists and Information Clerks	40	20.2	0.1
Typists	80	18.5	0.1
Order Clerks	280	24.0	0.5
Payroll and Timekeeping Clerks	30	5.9	0.1

Bookkeeping, Accounting, and Auditing Clerks	2,100	5.9	3.7
Billing, Cost, and Rate Clerks	110	25.4	0.2
General Office Clerks	1,140	8.1	2.0
Computer Operators	50	16.1	0.1
Peripheral Electronic Data Processing Equipment Operators	50	34.1	0.1
Data Entry Keyers	200	18.3	0.4
Dispatchers - except Police, Fire, and Ambulance	60	29.5	0.1
Weighers, Samplers, and Counters - Record Keeping	60	1.5	0.1
Stock Clerks - Stockroom or Warehouse	640	7.8	1.1
Order Fillers, Wholesale and Retail Sales	650	23.0	1.1
Traffic, Shipping, and Receiving Clerks	370	7.0	0.7
Other Material Recording and Related Workers	100	N.A.	0.2
Other Clerical and Administrative Workers	670	N.A.	1.2
Service Workers	4,610	N.A.	8.0
Service Supervisors	200	9.4	0.3
Guards and Watch Guards	100	16.1	0.2
Dining Room and Cafeteria Attendants	230	19.2	0.4
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	1,180	11.5	2.1
Cooks, Institution or Cafeteria	220	26.8	0.4
Cooks, Short Order	380	25.6	0.7
Food Preparation Workers	690	11.3	1.2
Other Food Service Workers	460	N.A.	0.8
Pharmacy Assistants	690	24.7	1.2
Janitors and Cleaners	300	23.4	0.5
Other Service Workers	160	N.A.	0.3
Agricultural, Forestry, and Fishery Workers	190	N.A.	0.3
Gardeners and Groundskeepers, except Farm	50	27.8	0.1
Other Agricultural, Forestry, and Fishery Workers	140	N.A.	0.2
Production and Maintenance Workers	8,710	N.A.	15.2
Mechanic and Repairer Supervisors	40	24.9	0.1
Maintenance Repairers, General Utility	350	14.9	0.6
Automotive Mechanics	240	17.6	0.4
Home Entertainment Equipment Repairers	110	33.9	0.2
Electric Appliance and Tool Repairers	120	26.2	0.2
Heating, Air Conditioning, and Refrigeration Mechanics	270	20.6	0.5

Watchmakers	180	18.7	0.3
Gas Appliance Repairers	270	21.6	0.5
Coin and Vending Machine Servicers	350	20.8	0.6
Other Mechanics, Installers, and Repairers	370	N.A.	0.6
Jewelers and Silversmiths	280	20.6	0.5
Other Precision Workers	180	N.A.	0.3
Other Machine Operators	100	N.A.	0.2
Other Hand Workers	380	N.A.	0.7
Truck Drivers, Heavy - inc. Tractor-Trailer	720	11.4	1.2
Truck Drivers, Light - inc. Delivery and Route Workers	1,480	8.2	2.6
Drivers / Sales Workers	1,190	10.6	2.1
Service Station Attendants	350	22.8	0.6
Industrial Truck and Tractor Operators	110	0.0	0.2
Other Material Moving Equipment Operators	120	N.A.	0.2
Material Movers, Hand	750	8.0	1.3
Hand Packers and Packagers	200	12.0	0.3
Other Laborers	430	N.A.	0.9

TABLE 17

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Salespersons, Retail	15,440	26.9
General Managers and Top Executives	4,250	7.4
Cashiers	3,940	6.9
Stock Clerks, Sales Floor	3,560	6.2
Pharmacists	2,920	5.1

FIGURE 34

Percent Distribution of Employment by Major Occupational Category

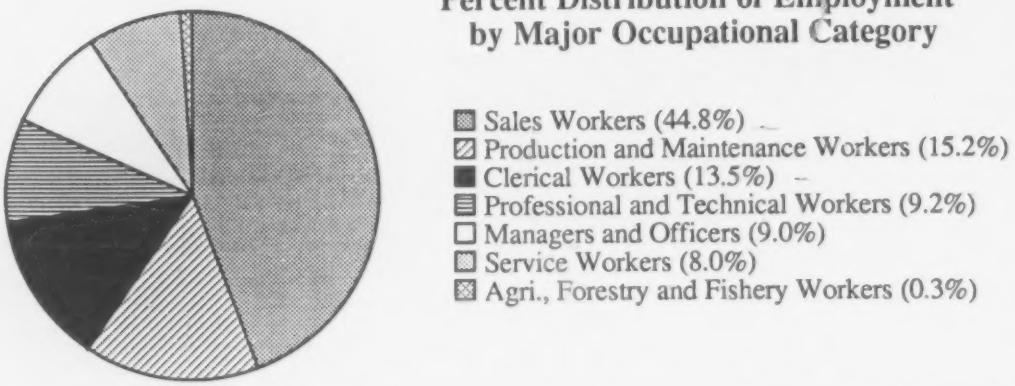
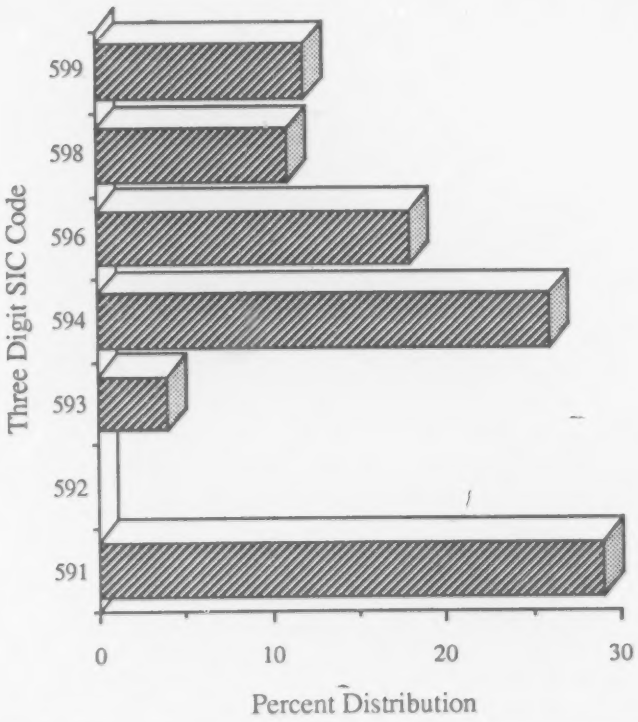

Sales Workers (44.8%)
Production and Maintenance Workers (15.2%)
Clerical Workers (13.5%)
Professional and Technical Workers (9.2%)
Managers and Officers (9.0%)
Service Workers (8.0%)
Agri., Forestry and Fishery Workers (0.3%)

FIGURE 35

Estimated Employment Distribution of Three Digit SIC Code



SIC 82

EDUCATIONAL SERVICES

April 1985

This major group includes establishments furnishing formal academic or technical courses, correspondence schools, commercial and trade schools, and libraries. Schools for the instruction of beauty parlor operations are classified in Group 723, and barber colleges in Group 724. Establishments primarily engaged in providing job training are classified in Industry 8331.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	209,740	N.A.	100.0
Managers and Officers	9,800	N.A.	4.7
Financial Managers	280	6.8	0.1
Personnel and Labor Relations Managers	160	21.7	0.1
Purchasing Managers	110	10.3	0.1
Marketing, Advertising, and Public Relations Managers	170	12.3	0.1
Administrative Services Managers	320	20.0	0.2
Engineering, Mathematical, and Natural Sciences Managers	120	27.6	0.1
Education Administrators	6,040	4.0	2.9
Food Service and Lodging Managers	430	7.1	0.2
General Managers and Top Executives	1,230	8.6	0.6
Other Managers and Administrators	940	N.A.	0.5
Professional and Technical Workers	128,370	N.A.	61.2
Accountants and Auditors	240	10.1	0.1
Personnel and Labor Relations Specialists	250	11.9	0.1
Other Management Support Workers	920	N.A.	0.4
Systems Analysts, EDP	130	12.8	0.1
Computer Programmers	330	12.3	0.2
Psychologists	380	6.7	0.2
Social Workers, except Medical and Psychiatric	170	7.6	0.1
Nursing Instructors	930	15.4	0.4
Teachers, Life Sciences	1,620	25.6	0.8
Teachers, Chemistry	470	13.2	0.2
Teachers, Physics	310	9.0	0.1
Teachers, Social Sciences	2,220	8.0	1.1
Teachers, Health Specialties	460	17.8	0.2

Teachers, English and Foreign Languages	2,270	8.5	1.1
Teachers, Art and Drama	1,190	14.1	0.6
Teachers, Engineering	910	16.8	0.4
Teachers, Mathematics	1,100	11.6	0.5
Teachers, Computer Science	630	8.5	0.3
Other Teachers, College	9,190	N.A.	4.4
Teachers, Preschool and Kindergarten	3,620	2.4	1.7
Teachers, Elementary	28,180	1.0	13.4
Teachers, Secondary	22,120	1.3	10.5
Teachers, Special Education	5,200	2.2	2.5
Teachers and Instructors, Vocational Education	5,880	11.4	2.8
Instructors, Nonvocational	7,050	18.9	3.4
Instructors and Coaches, Sports	970	10.8	0.5
Other Teachers and Related Workers	10,740	N.A.	5.1
Librarians, Professional	2,680	2.0	1.3
Technical Assistants, Library	1,560	15.5	0.7
Audio-Visual Specialists	390	6.2	0.2
Vocational and Educational Counselors	2,120	4.0	1.0
Instructional Coordinators	760	7.1	0.4
Teacher Aides, Paraprofessional	9,630	3.4	4.6
Speech Pathologists and Audiologists	430	5.3	0.2
Registered Nurses	340	20.7	0.2
Dieticians and Nutritionists	170	7.5	0.1
Other Health Professionals	1,170	N.A.	0.5
Athletes, Coaches, Umpires, and Referees	460	12.3	0.2
Other Professional and Technical Workers	1,180	N.A.	0.5
Sales Workers	500	N.A.	0.2
Cashiers	320	10.2	0.2
Other Sales and Related Workers	180	N.A.	0.1
Clerical Workers	25,970	N.A.	12.4
Clerical and Administrative Supervisors	680	13.6	0.3
Library Assistants and Bookmobile Drivers	350	12.9	0.2
Teacher Aides and Educational Assistants	8,540	3.6	4.1
Secretaries	8,260	4.2	3.9
Stenographers	250	23.9	0.1
Receptionists and Information Clerks	420	14.8	0.2
Typists	840	20.4	0.4
Typists, Word Processing	210	19.7	0.1
Personnel Clerks	130	10.8	0.1
Bookkeeping, Accounting, and Auditing Clerks	1,520	4.8	0.7
Payroll and Timekeeping Clerks	240	6.2	0.1

General Office Clerks	1,760	7.9	0.8
Duplicating Machine Operators	190	8.7	0.1
Computer Operators	160	11.0	0.1
Data Entry Keyers	240	19.2	0.1
Switchboard Operators	210	16.4	0.1
Mail Clerks, except Mail Machine Operators and Postal Service	150	9.3	0.1
Stock Clerks - Stockroom or Warehouse	250	13.5	0.1
Other Clerical and Administrative Workers	1,570	N.A.	0.6
Service Workers	25,240	N.A.	12.0
Service Supervisors	920	4.9	0.4
Guards and Watch Guards	500	17.1	0.2
Other Protective Service Workers	330	N.A.	0.2
Dining Room and Cafeteria Attendants	460	18.6	0.2
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	280	18.7	0.1
Cooks, Institutional or Cafeteria	9,150	2.0	4.4
Food Preparation Workers	3,400	4.5	1.6
Other Food Service Workers	530	N.A.	0.3
Maids and Housekeeping Cleaners	1,330	11.0	0.6
Janitors and Cleaners, except Maids and Housekeeping Cleaners	7,020	4.6	3.3
Other Cleaners and Building Service Workers	600	N.A.	0.3
Child Care Workers	230	27.2	0.1
Other Service Workers	490	N.A.	0.2
Agricultural, Forestry, and Fishery Workers	1,240	N.A.	0.6
Gardeners and Groundskeepers, except Farm	730	11.4	0.4
Other Agricultural, Forestry, and Fishery Workers	510	N.A.	0.2
Production and Maintenance Workers	17,770	N.A.	8.5
Mechanic and Repairer Supervisors	180	9.6	0.1
Other Supervisors	170	N.A.	0.1
Maintenance Repairers, General Utility	2,600	4.2	1.2
Automotive Mechanics	130	8.8	0.1
Bus, Truck, and Diesel Mechanics	670	2.9	0.3
Other Mechanics, Installers, and Repairers	300	N.A.	0.1
Carpenters	340	6.8	0.2
Electricians	290	7.6	0.1
Painters and Paperhangers	260	9.6	0.1
Plumbers and Pipefitters	210	9.0	0.1
Other Construction Trades Workers	190	N.A.	0.1
Bus Drivers, School	10,940	1.8	5.2

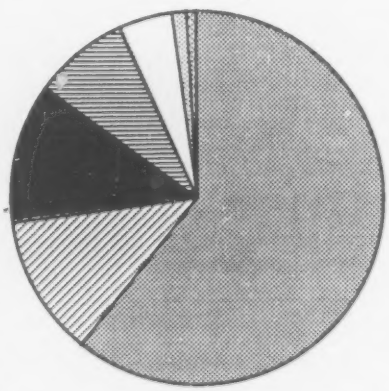
Other Transportation Workers	130	N.A.	0.1
Other Material-Moving Equipment Operators	270	N.A.	0.1
Other Laborers	1,090	N.A.	0.5

TABLE 18

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Teachers, Elementary	28,180	13.4
Teachers, Secondary	22,120	10.5
Bus Drivers, School	10,940	5.2
Teacher Aides, Paraprofessional	9,630	4.6
Cooks, Institutional or Cafeteria	9,150	4.4

FIGURE 36

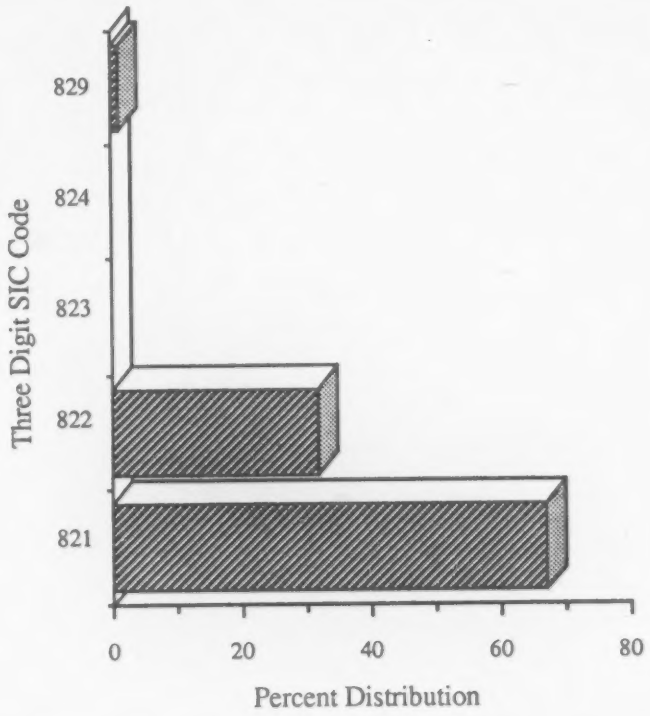


Percent Distribution of Employment by Major Occupational Category

- Professional and Technical Workers (61.2%)
- Clerical Workers (12.4%)
- Service Workers (12.0%)
- Production and Maintenance Workers (8.5%)
- Managers and Officers (4.7%)
- Agri., Forestry, and Fishery Workers (0.6%)
- Sales Workers (0.2%)

FIGURE 37

Estimated Employment Distribution by Three Digit SIC Code



LOCAL GOVERNMENT

May 1985

This major group includes full-time temporary, full-time permanent, part-time temporary, and part-time permanent employees on the local government payrolls as of May, 1985. Excluded are persons serving without compensation such as unpaid officials and members of boards and commissions, as well as persons on extended leave without pay. In addition, it excludes all persons employed in educational services and local government-operated hospitals.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	81,840	N.A.	100.0
Managers and Officers	4,510	N.A.	5.5
Financial Managers	250	14.4	0.3
Personnel and Labor Relations Managers	100	7.6	0.1
Purchasing Managers	20	18.1	0.1
Administrative Services Managers	950	33.1	1.2
Medical and Health Services Managers	240	30.4	0.3
Construction Managers	170	33.7	0.2
Communications, Transportation, and Utilities Operations Managers	350	29.0	0.4
Chief Executives, Legislators, and General Administrators	990	35.0	1.2
General Managers and Top Executives	800	13.5	1.0
Other Managers and Administrators	680	N.A.	0.8
Professional and Technical Workers	17,760	N.A.	21.7
Accountants and Auditors	320	26.3	0.4
Budget Analysts	60	9.9	0.1
Other Financial Specialists	60	N.A.	0.1
Purchasing Agents and Buyers	80	17.0	0.1
Personnel and Labor Relations Specialists	120	10.7	0.1
Construction and Building Inspectors	780	10.7	1.0
Compliance Officers and Enforcement Inspectors	650	12.7	0.8
Tax Examiners, Collectors, and Revenue Agents	840	27.0	1.0

Assessors	170	17.7	0.2
Other Management Support Workers	390	N.A.	0.5
Civil Engineers	210	14.4	0.2
Other Engineers	60	N.A.	0.1
Surveyors and Mapping Scientists	70	22.1	0.1
Civil Engineering Technicians and Technologists	160	14.9	0.2
Electrical and Electronic Engineering Technicians and Technologists	50	25.2	0.1
Drafters	180	13.0	0.2
Surveying and Mapping Technicians and Technologists	180	18.9	0.2
Other Engineering Technicians and Technologists	70	N.A.	0.1
Chemists	90	11.2	0.1
Foresters and Conservation Scientists	60	24.6	0.1
Agricultural Scientists	50	17.6	0.1
Physical and Life Science Technicians and Technologists	80	29.2	0.1
Systems Analysts, EDP	140	8.9	0.2
Computer Programmers	140	10.0	0.2
Computer Programmer Aides	40	20.0	0.1
Urban and Regional Planners	280	22.8	0.3
Psychologists	110	15.4	0.1
Social Workers, Medical and Psychiatric	650	16.5	0.8
Social Workers, except Medical and Psychiatric	2,210	13.9	2.7
Social Service Technicians	1,240	19.9	1.5
Recreation Workers	1,190	16.3	1.4
Lawyers	130	18.7	0.2
Other Legal Assistants and Technicians	70	N.A.	0.1
Teachers and Instructors, Vocational Education	70	27.2	0.1
Farm and Home Management Advisors	510	23.0	0.6
Librarians, Professional	600	18.5	0.7
Technical Assistants, Library	610	16.6	0.7
Vocational and Educational Counselors	90	29.3	0.1
Instructional Coordinators	70	17.9	0.1
Physicians and Surgeons	90	13.5	0.1
Therapists	100	24.9	0.1
Registered Nurses	1,960	22.5	2.4
Licensed Practical Nurses	250	24.5	0.3
Emergency Medical Technicians	1,560	28.3	1.9
Dieticians and Nutritionists	280	22.9	0.3
Other Health Officials	550	N.A.	0.7
Traffic Technicians	40	22.5	0.1
Radio Operators	60	25.6	0.1

Other Professional and Technical Workers	130	N.A.	0.1
Sales Workers	1,640	N.A.	2.0
Appraisers, Real Estate	80	13.8	0.1
Other Sales and Related Workers	1,560	N.A.	1.9
Clerical Workers	17,520	N.A.	21.4
Clerical and Administrative Supervisors	730	13.9	0.9
Welfare Eligibility Workers	2,820	13.4	3.4
Municipal Clerks	280	35.0	0.3
Library Assistants and Bookmobile Drivers	780	18.8	1.0
Teacher Aides and Educational Assistants	80	26.9	0.1
Secretaries	2,420	12.5	3.0
Stenographers	200	19.4	0.2
Receptionists and Information Clerks	360	8.9	0.4
Typists	1,790	12.6	2.2
Typists, Word Processing	250	31.9	0.3
Personnel Clerks	100	14.5	0.1
File Clerks	190	23.9	0.2
Statistical Clerks	70	28.6	0.1
Customer Service Representatives, Utilities	170	18.2	0.2
Bookkeeping, Accounting, and Auditing Clerks	1,090	16.5	1.3
Payroll and Timekeeping Clerks	130	13.4	0.2
Billing, Cost, and Rate Clerks	120	26.8	0.2
General Office Clerks	2,150	15.0	2.6
Computer Operators	200	27.6	0.2
Data Entry Keyers	250	11.0	0.3
Other Office Machine Operators	50	N.A.	0.1
Switchboard Operators	110	16.4	0.1
Dispatchers - Police, Fire, and Ambulance	1,260	10.7	1.5
Dispatchers, Other	110	13.8	0.1
Meter Readers, Utilities	780	29.4	1.0
Stock Clerks - Stockroom or Warehouse	170	22.2	0.2
Other Clerical and Administrative Workers	860	N.A.	1.1
Service Workers	22,820	N.A.	27.9
Fire Fighting and Prevention Supervisors	1,000	12.5	1.2
Police and Detective Supervisors	1,270	13.9	1.5
Other Service Supervisors	260	N.A.	0.3
Fire Inspectors	100	14.7	0.1
Fire Fighters	3,040	10.7	3.7
Police Detectives	1,420	25.0	1.7
Police Patrol Officers	4,410	13.0	5.4

Correction Officers and Jailers	740	16.9	0.9
Baliffs	150	22.0	0.2
Sheriffs and Deputy Sheriffs	2,300	12.2	2.8
Crossing Guards	570	11.9	0.7
Other Protective Service Workers	870	N.A.	1.1
Cooks, Institutional or Cafeteria	220	13.9	0.3
Other Food Service Workers	130	N.A.	0.2
Medical Assistants	100	18.5	0.1
Home Health Aides	810	32.8	1.0
Psychiatric Aides	130	28.0	0.2
Other Health Service Workers	550	N.A.	0.7
Cleaning and Building Service Workers	1,620	8.7	2.0
Amusement and Recreation Attendants	640	16.3	0.8
Social Welfare Service Aides	2,180	17.1	2.6
Child Care Workers	80	19.7	0.1
Other Service Workers	230	N.A.	0.3
Agricultural, Forestry, and Fishery Workers	1,530	N.A.	1.8
Gardeners and Groundskeepers, except Farm	1,430	16.5	1.7
Animal Caretakers	100	18.9	0.1
Production and Maintenance Workers	15,900	N.A.	19.4
Mechanic and Repairer Supervisors	450	25.6	0.6
Construction Trades Supervisors	350	23.7	0.4
Transportation and Material Moving Supervisors	80	35.0	0.1
Other Supervisors	440	N.A.	0.5
Machinery Maintenance Mechanics, Water and Power Generation	280	22.2	0.3
Other Machinery Maintenance Mechanics	80	N.A.	0.1
Maintenance Repairers, General Utility	1,200	30.3	1.4
Automotive Mechanics	440	8.1	0.5
Bus, Truck, and Diesel Mechanics	160	14.3	0.2
Mobile Heavy Equipment Mechanics	60	17.9	0.1
Heating, Air Conditioning, and Refrigeration Mechanics	50	18.2	0.1
Electric Meter Installers and Repairers	70	28.6	0.1
Mechanical Control and Valve Installers and Repairers	80	29.8	0.1
Other Mechanics, Installers, and Repairers	110	N.A.	0.1
Painters and Paperhangers	60	21.2	0.1
Other Construction Trades Workers	2,990	N.A.	3.7
Water and Waste Treatment Plant Operators	1,680	23.4	2.1
Other Plant Systems Operators	110	N.A.	0.1
Truck Drivers, Light - inc. Delivery and Route Workers	550	33.6	0.7

Bus Drivers	200	23.6	0.2
Other Transportation Workers	560	N.A.	0.7
Industrial Truck and Tractor Operators	340	21.3	0.4
Operating Engineers	410	25.4	0.5
Other Material Moving Equipment Operators	160	N.A.	0.2
Refuse Collectors	2,930	15.6	3.6
Other Laborers	2,060	N.A.	2.5

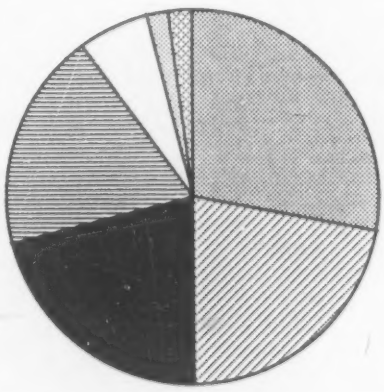
TABLE 19

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Police Patrol Officers	4,410	5.4
Fire Fighters	3,040	3.7
Refuse Collectors	2,930	3.6
Welfare Eligibility Workers	2,820	3.4
Secretaries	2,420	3.0

FIGURE 38

Percent Distribution of Employment by Major Occupational Category


Service Workers (28.0%)
Professional and Technical Workers (22.0%)
Clerical Workers (21.0%)
Production and Maintenance Workers (19.0%)
Managers and Officers (6.0%)
Sales Workers (2.0%)
Agri., Forestry, and Fishery Workers (2.0%)

STATE GOVERNMENT

May 1985

This major group includes full-time temporary, full-time permanent, part-time temporary, and part-time permanent employees on the State payroll as of May, 1985. Excluded are persons serving without compensation and persons on leave without pay. In addition, persons employed in educational services and state-operated hospitals are excluded.

Occupation	Estimated Employment 1/	Percent Distribution 1/
Total Employment	44,420	100.0
Managers and Officers	3,190	7.2
Financial Managers	110	0.2
Personnel and Labor Relations Managers	60	0.1
Education Administrators	30	0.1
Medical and Health Service Managers	80	0.2
Chief Executives, Legislators, and General Administrators	220	0.5
Other Managers and Administrators	2,690	6.1
Professional and Technical Workers	13,950	31.4
Accountants and Auditors	700	1.6
Budget Analysts	40	0.1
Purchasing Agents and Buyers, except Farm Products	60	0.1
Claims Takers, Unemployment Benefits	410	0.9
Employment Interviewers	1,070	2.4
Personnel and Labor Relations Specialists	340	0.8
Construction and Building Inspectors	260	0.6
Compliance Officers and Enforcement Inspectors	1,100	2.5
Tax Examiners, Collectors, and Revenue Agents	250	0.6
Assessors	40	0.1
Civil Engineers	250	0.6
Other Engineers	310	0.7
Civil Engineering Technicians and Technologists	540	1.2
Drafters	600	1.3
Other Engineering Technicians and Technologists	190	0.4
Chemists	200	0.4

Other Physical Scientists	110	0.2
Agricultural Scientists	30	0.1
Biological Scientists	80	0.2
Physical and Life Science Technicians and Technologists	100	0.2
Systems Analysts, EDP	250	0.6
Computer Programmers	80	0.2
Mathematical Scientists	40	0.1
Economists	40	0.1
Urban and Regional Planners	90	0.2
Psychologists	140	0.3
Other Social Scientists	240	0.5
Social Workers, Medical and Psychiatric	410	0.9
Social Workers, except Medical and Psychiatric	1,070	2.4
Social Service Technicians	330	0.7
Recreation Workers	220	0.5
Judges and Magistrates	840	1.9
Adjudicators, Hearing Officers, and Judicial Reviewers	40	0.1
Lawyers	560	1.3
Other Legal Assistants	340	0.8
Teachers and Instructors, Vocational Education	80	0.2
Librarians, Professional	50	0.1
Vocational and Educational Counselors	160	0.4
Instructional Coordinators	260	0.6
Physicians and Surgeons	60	0.1
Therapists	30	0.1
Registered Nurses	160	0.4
Other Health Professional and Technicians	340	0.7
Public Relations Specialists	100	0.2
Radio Operators	100	0.2
Other Professional and Technical Workers	1,240	2.8
Clerical Workers	9,760	22.0
Clerical and Administrative Supervisors	790	1.8
Welfare Eligibility Workers	180	0.4
Court Clerks	1,240	2.8
License Clerks	360	0.8
Library Assistants and Bookmobile Drivers	20	0.1
Teacher Aides and Educational Assistants	50	0.1
Secretaries	1,060	2.4
Stenographers	870	2.0
Receptionists and Information Clerks	60	0.1
Typists	1,420	3.2
Typists, Word Processing	140	0.3
Personnel Clerks	140	0.3

File Clerks	50	0.1
Statistical Clerks	440	1.0
Bookkeeping, Accounting, and Auditing Clerks	580	1.3
Payroll and Timekeeping Clerks	30	0.1
General Office Clerks	1,100	2.5
Billing, Cost, and Rate Clerks	30	0.1
Computer Operators	80	0.2
Data Entry Keyers	470	1.1
Other Office Machine Operators	150	0.3
Mail Clerks	60	0.1
Stock Clerks - Stockroom or Warehouse	120	0.3
Other Clerical and Administrative Workers	310	0.7
Service Workers	8,140	18.3
Police and Detective Supervisors	800	1.8
Other Service Supervisors	350	0.8
Forest Fire Inspectors	260	0.6
Fire Fighters	100	0.2
Police Detectives	180	0.4
Police Patrol Officers	1,380	3.1
Correction Officers and Jailers	3,560	8.0
Fish and Game Wardens	280	0.6
Guards and Watch Guards	110	0.2
Other Protection Service Workers	100	0.2
Cooks, Institutional or Cafeteria	40	0.1
Food Preparation Workers	20	0.1
Medical Assistants	30	0.1
Nurse Aides and Orderlies	180	0.4
Cleaning and Building Service Workers	340	0.8
Other Service Workers	410	0.9
Agricultural, Forestry, and Fishery Workers	500	1.1
Forest and Conservation Workers	80	0.2
Gardeners and Groundskeepers, except Farm	180	0.4
Animal Caretakers	110	0.2
Other Agricultural, Forestry, and Fishery Workers	130	0.3
Production and Maintenance Workers	8,870	20.0
Mechanic and Repairer Supervisors	990	2.2
Transportation Supervisors	40	0.1
Other Supervisors	360	0.8
Other Inspectors and Testers	240	0.5
Machinery Maintenance Workers	50	0.1
Automotive Mechanics	560	1.3

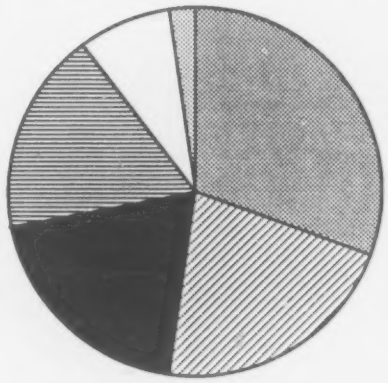
Other Mechanics, Installers, and Repairers	280	0.6
Carpenters	160	0.3
Electricians	40	0.1
Painters and Paperhangers	40	0.1
Highway Maintenance Workers	250	0.6
Other Construction Trades Workers	840	1.9
Machine Setters, Operators, and Tenders	2,550	5.7
Other Plant and Systems Operators	40	0.1
Truck Drivers, Heavy - inc. Tractor-Trailer	60	0.1
Other Transportation Workers	80	0.2
Other Laborers	2,290	5.2

TABLE 20

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Correction Officers and Jailers	3,560	8.0
Machine Setters, Operators, and Tenders	2,550	5.7
Typists	1,420	3.2
Police Patrol Officers	1,380	3.1
Court Clerks	1,240	2.8

FIGURE 39



Percent Distribution of Employment by Major Occupational Category

- Professional and Technical Workers (31.0%)
- Clerical Workers (22.0%)
- Production and Maintenance Workers (20.0%)
- Service Workers (18.0%)
- Managers and Officers (8.0%)
- Agri., Forestry, and Fishery Workers (1.0%)

FEDERAL GOVERNMENT

October 1985

This major group includes full-time temporary, full-time permanent, part-time temporary, and part-time permanent employees of the Federal Government in North Carolina in 1985.

Occupation	Estimated Employment 1	Percent Distribution 1/
Total Employment	44,920	100.0
Managers and Officers	1,420	3.2
Personnel, Training, and Labor Relations Managers	30	0.1
Administrative Services Managers	40	0.1
Engineering, Mathematical, and Natural Sciences Managers	120	0.3
Postmasters and Mail Superintendants	890	2.0
Medical and Health Services Managers	80	0.2
Communications, Transportation, and Utilities Operations Managers	30	0.1
General Managers and Top Executives	60	0.1
Other Managers and Officers	180	0.4
Professional and Technical Workers	13,240	29.5
Loan Officers and Counselors	100	0.2
Accountants and Auditors	260	0.6
Budget Analysts	90	0.2
Other Financial Specialists	40	0.1
Purchasing Agents and Buyers, except Farm Products	310	0.7
Personnel, Training, and Labor Relations Specialists	260	0.6
Management Analysts	160	0.4
Construction and Building Inspectors	120	0.3
Compliance Officers and Enforcement Inspectors, except Construction	620	1.4
Tax Examiners, Collectors, and Revenue Agents	420	0.9
Other Management Support Workers	190	0.4
Aeronautical and Astronautical Engineers	70	0.2
Chemical Engineers	40	0.1

Civil Engineers, including Traffic	210	0.5
Electrical and Electronic Engineers	80	0.2
Industrial Engineers, except Safety	40	0.1
Safety Engineers, except Mining	40	0.1
Mechanical Engineers	40	0.1
Other Engineers	190	0.4
Electrical and Electronic Engineering Technicians and Technologists	310	0.7
Industrial Engineering Technicians and Technologists	80	0.2
Surveying and Mapping Technicians and Technologists	30	0.1
Other Engineering and Related Technicians and Technologists	450	1.0
Chemists, except Biochemists	220	0.5
Atmospheric and Space Scientists	90	0.2
Geologists, Geophysicists, and Oceanographers	40	0.1
Other Physical Scientists	160	0.4
Foresters and Conservation Scientists	220	0.5
Agricultural and Food Scientists	230	0.5
Biological Scientists	380	0.8
Medical Scientists	40	0.1
Biological, Agricultural, and Food Technicians and Technologists, except Health	320	0.7
Other Physical and Life Science Technicians and Technologists	220	0.5
Systems Analysts, EDP	380	0.8
Computer Programmers	40	0.1
Computer Programmer Aides	160	0.4
Statisticians	60	0.1
Psychologists	50	0.1
Other Social Scientists	90	0.2
Social Workers, except Medical and Psychiatric	70	0.2
Recreation Workers	80	0.2
Lawyers	100	0.2
Other Legal Assistants, except Clerical	420	0.9
Teachers and Instructors, Vocational Education	560	1.2
Librarians, Professional	80	0.2
Teacher Aides, Paraprofessional	130	0.3
Physicians and Surgeons	390	0.8
Dentists	30	0.1
Veterinarians and Veterinary Inspectors	60	0.1
Therapists, Physical, Speech, etc.	80	0.2
Registered Nurses	970	2.2
Licensed Practical Nurses	350	0.8
Physician's Assistants	30	0.1
Pharmacists	60	0.1
Dieticians and Nutritionists	30	0.1

Medical and Clinical Laboratory Technologists	190	0.4
Medical Records Technicians and Technologists	40	0.1
Radiologic Technicians	80	0.2
Other Health Professionals and Technicians	170	0.4
Writers and Editors	50	0.1
Photographers	30	0.1
Airplane Dispatchers and Air Traffic Controllers	350	0.8
Other Professional and Technical Workers	2,080	4.6
Sales Workers	290	0.6
Sales Supervisors	40	0.1
Salespersons, Retail	190	0.4
Other Sales and Related Workers	60	0.1
Clerical Workers	18,650	41.5
Clerical Supervisors	840	1.9
Insurance Adjusters, Examiners, and Investigators	60	0.1
Insurance Claims Clerks	280	0.6
Travel Clerks	30	0.1
Secretaries	1,080	2.4
Stenographers	150	0.3
Receptionists and Information Clerks	100	0.2
Typists	1,140	2.5
Personnel Clerks	380	0.8
Procurement Clerks	80	0.2
Interviewing Clerks	240	0.5
Bookkeeping, Accounting, and Auditing Clerks	540	1.2
Payroll and Timekeeping Clerks	130	0.3
General Office Clerks	270	0.6
Mail Machine Operators	30	0.1
Computer Operators	110	0.2
Data Entry Keyers	140	0.3
Other Office Machine Operators	70	0.2
Switchboard Operators	80	0.2
Other Communications Equipment Operators	60	0.1
Mail Clerks, except Mail Machine Operators	290	0.6
Mail Carriers, Postal Service	4,700	10.5
Clerks, Postal Service	2,030	4.5
Messengers	40	0.1
Production, Planning, and Expediting Clerks	420	0.9
Stock Clerks - Stockroom or Warehouse	900	2.0
Traffic, Shipping and Receiving Clerks	3,140	7.0
Other Material Recording and Scheduling Workers	60	0.1
Other Clerical and Administrative Workers	1,260	2.8

Service Workers	2,740	6.1
Fire Fighting and Prevention Supervisors	60	0.1
Police and Detective Supervisors	50	0.1
Other Supervisors	130	0.3
Fire Fighters	280	0.6
Correction Officers and Jailers	80	0.2
Criminal Investigators, Federal	180	0.4
Guards and Watch Guards	80	0.2
Other Protection Service Workers	70	0.2
Butchers and Meat Cutters	70	0.2
Cooks, Institutional or Cafeteria	90	0.2
Combination Food Preparation and Service Workers	320	0.7
Dental Assistants	130	0.3
Nurse Aides, Orderlies, and Attendants	460	1.0
Pharmacy Assistants	60	0.1
Other Health Service Workers	140	0.3
Janitors and Cleaners	440	1.0
Pest Controllers and Assistants	30	0.1
Social Welfare Service Aides	50	0.1
Agricultural, Forestry, and Fishery Workers	260	0.6
Forest and Conservation Workers	130	0.3
Gardeners and Groundskeepers, except Farm	30	0.1
Other Agricultural, Forestry, and Fishery Workers	100	0.2
Production and Maintenance Workers	8,310	18.5
Mechanic and Repairer Supervisors	400	0.9
Construction, Trades, and Extractive Supervisors	70	0.2
Production and Operative Supervisors	130	0.3
Transportation and Material-Moving Machine Supervisors	70	0.2
Helper and Laborer Supervisors	70	0.2
Production Inspectors, Testers, and Graders	60	0.1
Machinery Maintenance Mechanics	170	0.4
Machinery Maintenance Workers	110	0.2
Maintenance Repairers, General Utility	420	0.9
Automotive Mechanics	260	0.6
Mobile Heavy Equipment Mechanics, except Engines	200	0.5
Aircraft Mechanics	480	1.1
Aircraft Engine Specialists	280	0.6
Central Office and PBX Installers and Repairers	50	0.1
Electric Motor, Transformer, and Related Repairers	30	0.1

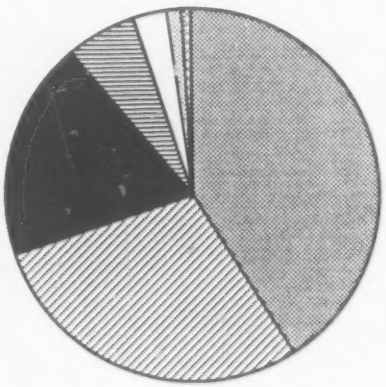
Electronics Repairers, Commercial / Industrial Equipment	350	0.8
Electric Powerline Installers and Repairers	60	0.1
Electrical Installers / Repairers, Transportation Equipment	180	0.4
Other Electrical and Electronic Equipment Mechanics, Installers, and Repairers	100	0.2
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	100	0.2
Precision Instrument Repairers	60	0.1
Mechanical Control and Valve Installers and Repairers	140	0.3
Other Mechanics, Installers, and Repairers	250	0.5
Carpenters	240	0.5
Electricians	150	0.3
Stonemasons	30	0.1
Painters and Paperhangers	170	0.4
Plumbers, Pipefitters, and Steamfitters	170	0.4
Other Construction Trades Workers	60	0.1
Machinists	200	0.5
Sheet Metal Workers	380	0.8
Combination Machine Tool Setters and Operators, Metal and Plastic	30	0.1
Other Machine Operators and Tenders, Metal and Plastic	80	0.2
Printing Press Machine Operators and Tenders	30	0.1
Other Machine Operators and Tenders, except Metal and Plastic	70	0.2
Welders and Cutters	80	0.2
Assemblers and Fabricators	70	0.2
Other Hand Workers	60	0.1
Water and Waste Treatment Plant Operators	110	0.2
Stationary Engineers	120	0.3
Truck Drivers, Light - inc. Delivery and Route Workers	40	0.1
Other Motor Vehicle Operators	280	0.6
Other Transportation and Related Workers	80	0.2
Industrial Truck and Tractor Operators	130	0.3
Operating Engineers	80	0.2
Other Material-Moving Equipment Operators	100	0.2
Hand Packers and Packagers	30	0.1
Vehicle Washers and Equipment Cleaners	80	0.2
Other Laborers	1,240	2.8
Other Production and Maintenance Workers	140	0.3

TABLE 21

The Five Largest Specific Occupations

Occupation	Estimated Employment	Percent of Total Employment
Mail Carriers, Postal Service	4,700	10.5
Traffic, Shipping, and Receiving Clerks	3,140	7.0
Clerks, Postal Service	2,030	4.5
Typists	1,140	2.5
Secretaries	1,080	2.4

FIGURE 40



Percent Distribution of Employment by Major Occupational Category

- Clerical Workers (41.0%)
- Professional and Technical Workers (29.0%)
- Production and Maintenance Workers (19.0%)
- Service Workers (6.0%)
- Managers and Officers (3.0%)
- Sales Workers (1.0%)
- Agri., Forestry, and Fishery Workers (1.0%)

Methodology

A questionnaire was mailed to each of the sampled establishments in order to obtain occupational data. The total occupational employment for an industry was then estimated from the responding establishments.

- **Sample**

The sample was drawn using procedures outlined in the OES Survey Operations Manual. Establishments were divided into different size classes by number of employees. All establishments with more than 250 employees were sampled. Establishments in each smaller size class were sampled in proportion to the employment in the size class; however, no establishment with fewer than four employees was sampled. Employment in these establishments was accounted for in the next larger size class. Each unit that was sampled was assigned a weight according to the ratio of units sampled in that size class. For example, when all units in a size class were sampled, the weight was one. When the units were sampled at a ratio of one out of four, the sampled unit was given a weight of four. The weighted establishment then represented itself and three other establishments.

- **Collection**

Data collection began in April 1985 and ended in March 1986. Two follow-up mailings, personal visits, or telephone calls were made to those establishments whose response was vital for statistical purposes, to those who had difficulty completing the questionnaire, or to those where clarification of the response was necessary.

- **Estimates**

Data from the questionnaires were keyed and loaded to tape. The tape was processed using the OES Survey Processing and Management Systems (SPAM) programs to sort and screen the data. The estimating programs sorted the data into size-class cells. The weighted employment of each occupation in each cell was then estimated individually and summed across all cells in order to produce the final occupational employment estimate for each industry.

- **Error**

Two types of errors, sampling and non-sampling, can affect the results of a survey. Sampling error is the difference between the estimates developed from data collected from a sample and the data collected from the universe from which the sample was drawn. Sampling error is measurable and is expressed as relative error. The relative error shown in the publication is such that the chances are two out of three that the results of comparable universal data collection would not differ by more than the percentage shown. Non-sampling error can arise from faulty questionnaire design, inability to collect necessary data, inacurracy of data collected, and ineffective processing techniques. Non-sampling error cannot be measured.

- **Publication**

After the data file was processed through the OES estimates programs, a computer printout was received which contained the estimated employment for each occupation, the relative error of the occupational estimate, the percent distribution of the occupational employment, the number of employees reported in each occupation, and the number of establishments which reported each occupation.

Industries were surveyed at the 3-digit SIC level, however, published data are at the 2-digit level of detail. The following exceptions were made to this format. All Federal government and a substantial portion of Railroad Transportation employment (SIC 40) was supplied by the BLS Regional office in Atlanta. Summary data for State government employment was provided by the N.C. Department of Administration's data processing unit.

Occupational data were not published for industries when the industry employment was less than 1,000. The estimated employment for occupations was rounded to the nearest ten. The estimated employment was put in a residual category when the estimated employment for an occupation was less than 15 or less than 0.05 percent of the total group employment, when the relative error was more than 35.0 percent, or when an occupation was not reported by at least four establishments. Although they are not published here, the suppressed industry and occupational data will be included in the industry/occupational matrix.

Relative error is not applicable (NA) for residual categories, occupational group totals, and total employment because it is not additive. The percent distribution was computed on the unrounded employment estimates, therefore, some occupations with the same published estimated employment may not bear the same percent distribution.

NOTE: Due to rounding the sum of the occupations may not equal the total employment of the occupational category.

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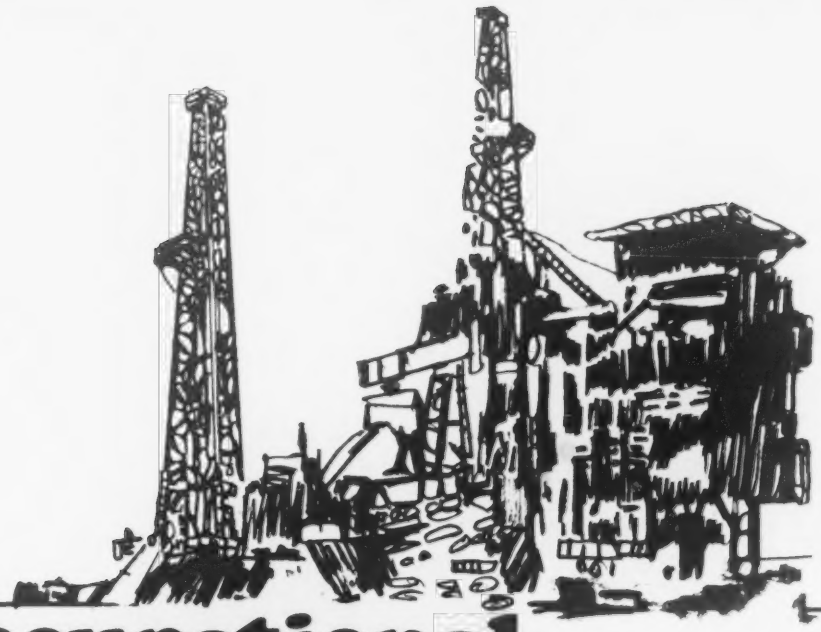
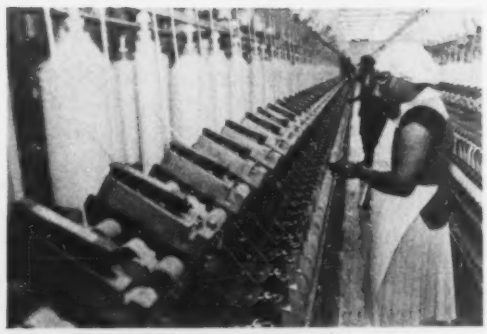


Occupational Employment in Manufacturing and Hospitals North Carolina 1986

Labor Market Information Division
Employment Security Commission of North Carolina

Occupational Employment in Selected Manufacturing Industries and Hospitals in North Carolina

1986



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A special thanks is extended to each of the more than 3,900 employers whose survey responses provided the occupational information on which this report was developed. We also thank the North Carolina Department of Administration for providing summary data for state government employment.

Introduction

The Occupational Employment Statistics (OES) program is a cooperative effort of the Bureau of Labor Statistics and the nation's State Employment Security Agencies. In North Carolina, the Labor Market Information Division bears the responsibility for the collection, analysis and distribution of information relating to the occupational staffing patterns of the state's industries. Industries are surveyed on a three-year rotating cycle to increase the cost effectiveness of the data collection and to reduce the reporting burden of employers who are asked to participate in the study. Research done by the Bureau of Labor Statistics has indicated that staffing patterns tend to remain relatively static, and therefore useful, over this time span. The project looks at only nonagricultural wage and salary employment. Data for self-employment, agriculture, and unpaid family members are not included. The three survey rounds are defined as follows:

Manufacturing and Hospitals

Nonmanufacturing Industries

Trade, Regulated Industries and Government

When viewed together, the results of these three survey rounds give a clear and accurate picture of occupations and industries in North Carolina which may be utilized by educators, counselors and planners in a number of ways including, but not limited to, the following:

- Curriculum and Training Applications
  - for assessment of current and future occupational needs
  - for planning study curricula and development of training programs in accordance with changing job requirements
- Career and Job Counseling
  - for guidance of students, trainees, and job seekers in career or job selection
  - for background in applicant referrals to industries and locations where specific skills are needed
- Industry and Business Administration
  - for improvement of worker selection by more equitably matching job training with occupational needs
  - for policy formulation and planning in terms of present and anticipated occupational patterns
  - for increased cooperation between industry and educational planners in determining needed program emphasis to meet the needs of a changing work force

This is the sixth report in the OES series based on a survey of covered manufacturing establishments as defined in the 1972 edition of the Standard Industrial Classification Manual (SIC).

In 1986, there were 831,900 persons employed in the surveyed manufacturing industries in North Carolina. This represents 30.6% of all nonagricultural wage and salary employment in the state, compared to the 32.8% shown by the 1983 survey.

Figure 1 depicts the relationship of manufacturing employment to the other major divisions of nonagricultural wage and salary employment in the state for 1986. Since the last OES survey on manufacturing industries three years ago, the nonmanufacturing sector, as well as wholesale and retail trade, have experienced considerable growth, with employment gains of 38.2% and 20.4%, respectively. During the same period, manufacturing and government were gaining employment at a slower rate while actually decreasing in their proportionate share of total nonagricultural wage and salary employment - from 1983 levels of 32.8% and 17.0% to respective shares of 30.6% and 15.7% in 1986.

Figure 2 shows the average annual nonagricultural wage and salary employment in North Carolina for the ten-year period, 1977-1986. Figure 3 reflects average annual employment in the manufacturing sector for the same period.

Note: Employment data for Figures 1, 2, and 3 are expressed as annual average figures. The data were provided by the Current Employment Statistics (CES) Unit of the Labor Market Information Division.

FIGURE 1

MANUFACTURING EMPLOYMENT COMPARED TO OTHER MAJOR INDUSTRY SECTORS - 1986

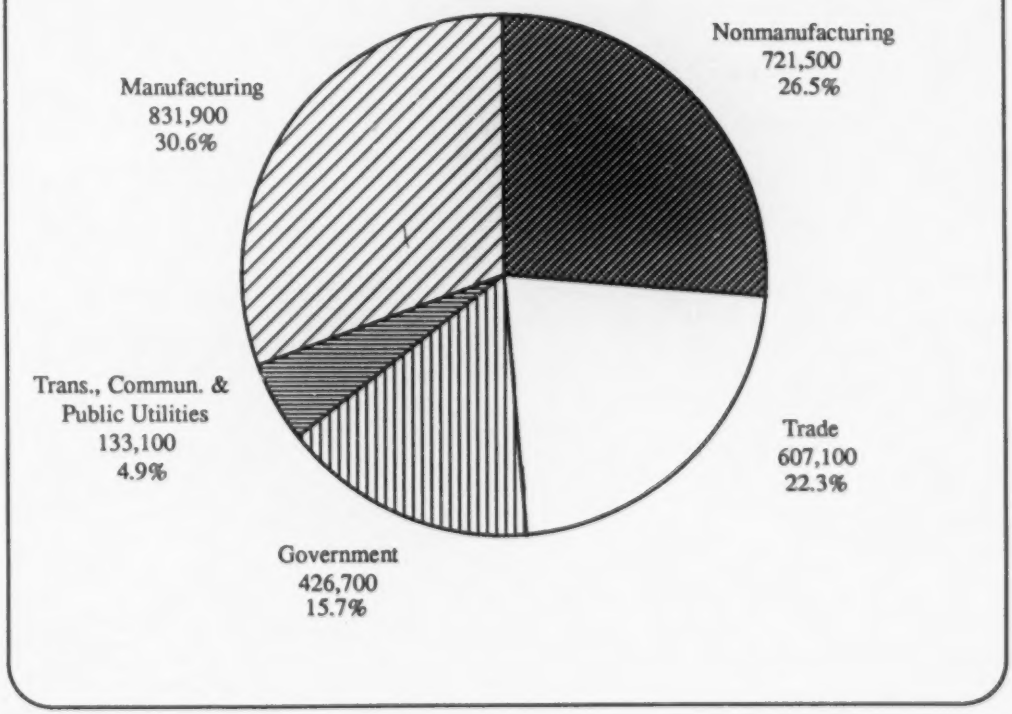
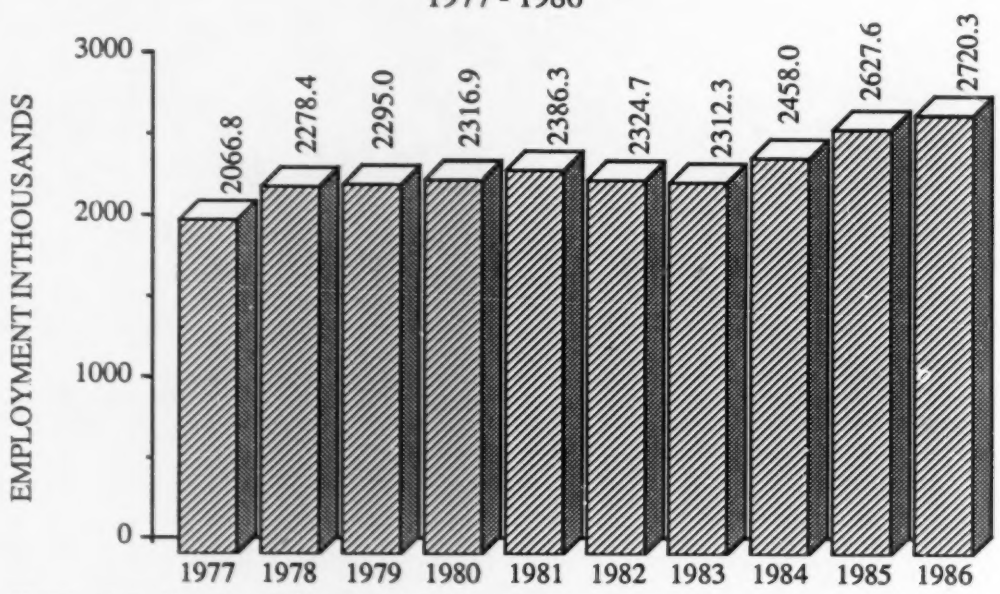


FIGURE 2

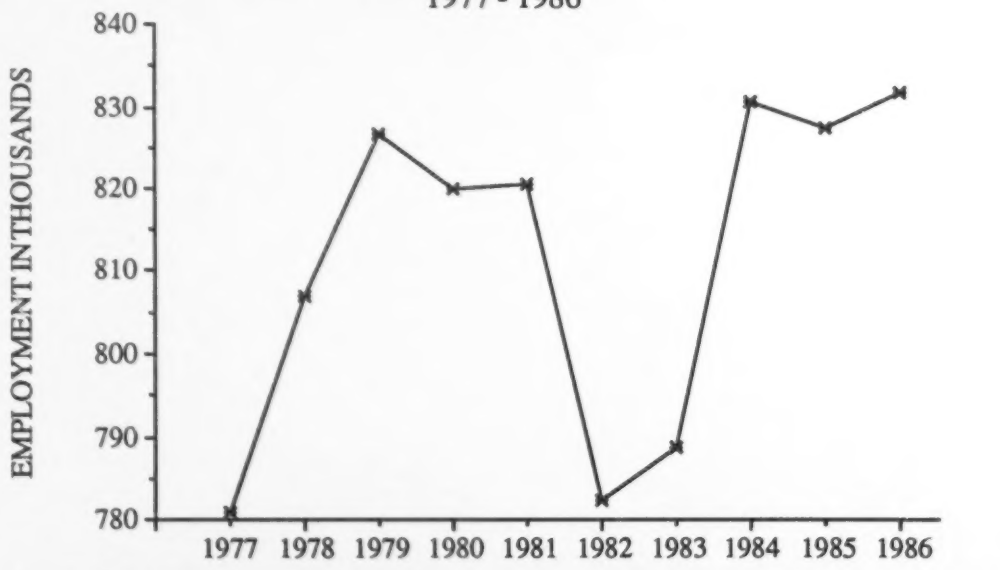
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
IN NORTH CAROLINA
1977 - 1986



NOTE: Annual average employment is based on place of residence.

FIGURE 3

MANUFACTURING WAGE AND SALARY EMPLOYMENT
IN NORTH CAROLINA
1977 - 1986



NOTE: Employment for this table represents only the surveyed manufacturing industries as reported by Current Employment Statistics (CES) Unit.

SIC 20

Except 201, 203 and 205

FOOD AND KINDRED PRODUCTS
June 1986

This major group includes establishments for manufacturing or processing foods and beverages for human consumption, and certain related products, such as manufactured ice, chewing gum, vegetable and animal fats, oils, and prepared feeds for animals.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	15,920	NA	100.0
Managers and Officers	1,100	NA	6.9
Financial Managers	70	19.1	0.4
Personnel and Labor Relations Managers	30	17.6	0.2
Purchasing Managers	20	29.7	0.1
Marketing, Advertising, and Public Relations Managers	120	19.6	0.7
Administrative Service Managers	20	29.9	0.1
Industrial Production Managers	150	11.5	0.9
General Managers and Top Executives	430	13.3	2.7
Other Managers and Administrators	260	NA	1.7
Professional and Technical Workers	360	NA	2.3
Accountants and Auditors	50	25.4	0.3
Purchasing Agents and Buyers, except Farm Products	20	32.8	0.1
Personnel and Labor Relations Specialists	20	30.2	0.2
Other Management Support Workers	30	NA	0.2
Mechanical Engineers	20	35.0	0.1
Other Engineers	30	NA	0.2
Other Science Technicians and Technologists	100	NA	0.7
Other Professional and Technical Workers	90	NA	0.6
Sales Workers	800	NA	5.0
Sales Supervisors	140	33.2	0.9
Sales Representatives, Scientific - except Retail	240	18.2	1.5
Sales Representatives, Nonscientific - except Retail	330	22.9	2.1
Other Sales and Related Workers	90	NA	0.5

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Clerical Workers	1,640	NA	10.3
Clerical and Administrative Supervisors	80	19.3	0.5
Adjustment Clerks	30	21.4	0.2
Secretaries	190	9.9	1.2
Receptionists and Information Clerks	40	20.3	0.2
Personnel Clerks	20	25.2	0.1
Order Clerks	30	22.7	0.2
Bookkeeping, Accounting, and Auditing Clerks	240	12.1	1.5
Payroll and Timekeeping Clerks	20	17.5	0.1
Billing, Cost, and Rate Clerks	40	29.0	0.2
General Office Clerks	180	21.2	1.2
Data Entry Keyers	120	22.1	0.8
Other Office Machine Operators	70	NA	0.4
Switchboard Operators	30	21.5	0.2
Production, Planning, and Expediting Clerks	30	26.0	0.2
Weighers, Measurers, Checkers, and Samplers	50	16.8	0.3
Traffic, Shipping, and Receiving Clerks	110	11.9	0.7
Other Clerical and Administrative Workers	360	NA	2.3
Service Workers	420	NA	2.6
Guards and Watch Guards	40	30.9	0.3
Janitors and Cleaners	210	12.2	1.3
Other Service Workers	170	NA	1.1
Agricultural, Forestry, or Fishery Workers	140	NA	0.9
Production and Maintenance Workers	11,460	NA	72.0
Production Supervisors	490	17.4	3.1
Transportation and Material Moving Supervisors	270	18.4	1.7
Labor Supervisors	20	23.3	0.2
Other Supervisors	110	NA	0.7
Production Inspectors	350	28.4	2.2
Machinery Maintenance Mechanics	230	33.1	1.4
Machinery Maintenance Workers	40	25.8	0.3
Maintenance Repairers, General Utility	280	23.2	1.8
Automotive Mechanics	40	35.0	0.3
Bus, Truck, and Diesel Mechanics	110	24.9	0.7
Other Mechanics, Installers, and Repairers	310	NA	1.9
Other Construction and Extractive Workers	100	NA	0.6
Food Batchmakers	80	31.4	0.5
Other Precision Workers	200	NA	1.3
Cooking Machine Operators and Tenders	110	24.3	0.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Dairy Processing Equipment Setters and Operators	240	17.1	1.5
Separating and Filtering Machine Operators and Tenders	50	32.5	0.3
Crushing, Grinding, and Mixing Machine Operators and Tenders	320	17.2	2.0
Extruding, Forming, and Pressing Machine Operators and Tenders	50	28.2	0.3
Other Machine Setters and Set-up Operators	20	NA	0.1
Other Machine Operators and Tenders	1,870	NA	11.8
Meat, Poultry, and Fish Cutters, Hand	700	18.8	4.4
Other Hand Workers	250	NA	1.6
Stationary Engineers	20	25.2	0.1
Truck Driver, Heavy-inc. Tractor-Trailer	680	11.2	4.3
Driver/Sales Workers	1,610	28.6	10.1
Other Transportation Workers	260	NA	1.6
Industrial Truck and Tractor Operators	440	34.8	2.7
Conveyor Operators and Tenders	60	12.3	0.4
Machine Feeders and Offbearers	180	24.0	1.1
Material Movers, Hand	760	18.6	4.8
Hand Packers and Packagers	420	15.5	2.6
Other Laborers	790	NA	5.0

1/ Details may not add to total due to rounding or data suppression.

TABLE 1

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Driver/Sales Workers	1,610	10.1
Material Movers, Hand	760	4.8
Meat, Poultry, and Fish Cutters, Hand	700	4.4
Truck Drivers, Heavy-inc. Tractor Trailer	680	4.3
Production Supervisors	490	3.1

FIGURE 4

PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

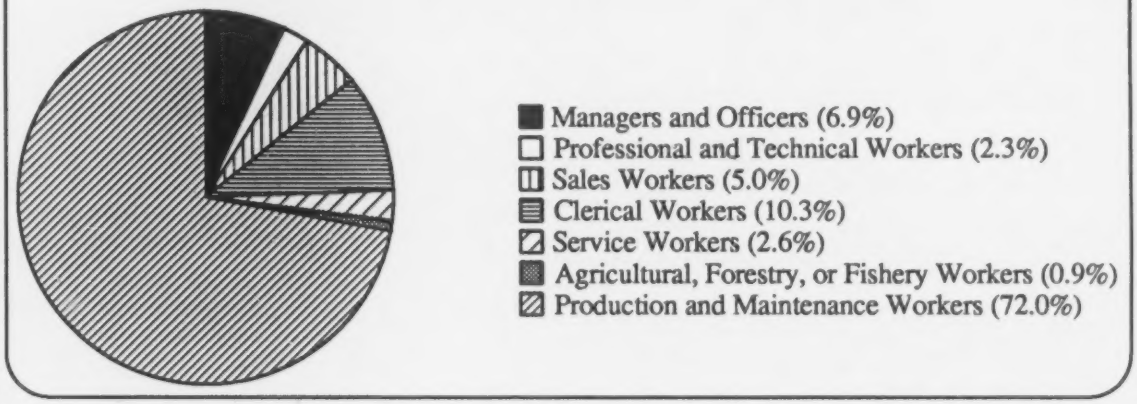
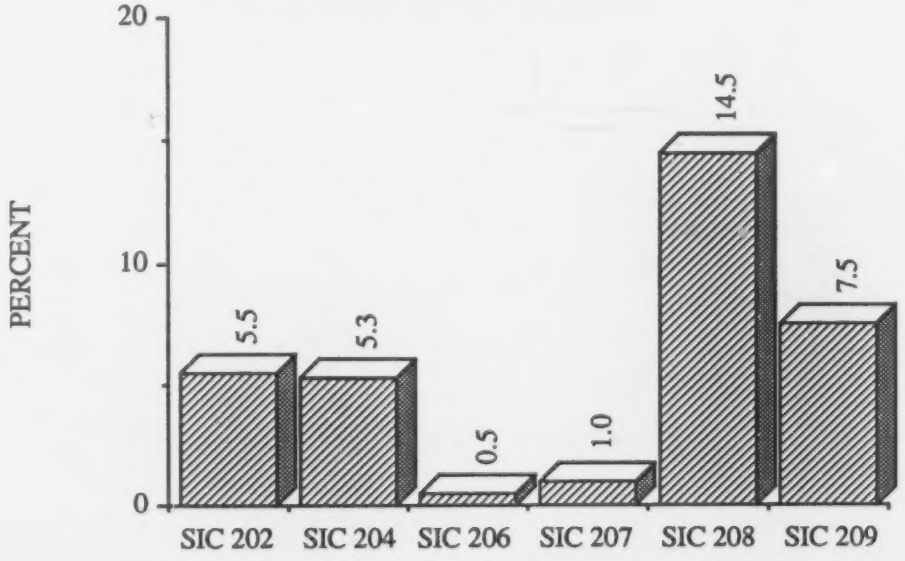

Managers and Officers (6.9%)
Professional and Technical Workers (2.3%)
Sales Workers (5.0%)
Clerical Workers (10.3%)
Service Workers (2.6%)
Agricultural, Forestry, or Fishery Workers (0.9%)
Production and Maintenance Workers (72.0%)

FIGURE 5

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 21

TOBACCO MANUFACTURERS
June 1986

Establishments in this major group are involved in the manufacture of cigarettes, cigars, smoking and chewing tobacco, and snuff. The stemming and redrying of tobacco are included in this category.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	23,570	NA	100.0
Managers and Officers	1,330	NA	5.6
Financial Managers	70	11.9	0.3
Personnel and Labor Relations Managers	50	5.4	0.2
Purchasing Managers	20	23.8	0.1
Marketing, Advertising, and Public Relations Managers	90	14.2	0.4
Engineering, Math, and Natural Science Managers	320	11.5	1.3
Industrial Production Managers	50	17.6	0.2
General Managers and Top Executives	520	10.0	2.2
Other Managers and Administrators	210	NA	0.9
Professional and Technical Workers	1,520	NA	6.4
Accountants and Auditors	60	7.5	0.2
Other Financial Specialists	20	NA	0.1
Purchasing Agents and Buyers, Farm Products	340	8.6	1.4
Purchasing Agents and Buyers, except Farm Products	50	4.6	0.2
Personnel and Labor Relations Specialists	80	34.2	0.3
Other Management Support Workers	90	NA	0.3
Industrial Engineers, except Safety	20	27.5	0.1
Mechanical Engineers	120	6.1	0.5
Other Engineers	130	NA	0.5
Other Engineering Technicians and Technologists	40	NA	0.2
Chemists	120	12.3	0.5
EDP Systems Analysts	200	9.4	0.8
Computer Programmers	40	12.6	0.2
Other Health Professionals and Technicians	30	NA	0.1
Other Professional and Technical Workers	180	NA	0.8

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Sales Workers	2,450	NA	10.4
Clerical Workers	1,130	NA	4.8
Clerical and Administrative Supervisors	20	20.4	0.1
Secretaries	450	6.5	1.9
Receptionists and Information Clerks	20	11.1	0.1
Personnel Clerks	20	18.7	0.1
Bookkeeping, Accounting, and Auditing Clerks	90	17.2	0.4
Payroll and Timekeeping Clerks	30	26.0	0.1
Billing, Cost, and Rate Clerks	30	30.8	0.1
Computer Operators	70	7.2	0.3
Data Entry Keyers	40	16.1	0.2
Switchboard Operators	20	13.3	0.1
Weighers, Measurers, Checkers, and Samplers	60	18.1	0.3
Stock Clerks - Stockroom or Warehouse	100	10.6	0.4
Traffic, Shipping, and Receiving Clerks	80	14.8	0.3
Other Clerical and Administrative Workers	100	NA	0.4
Service Workers	420	NA	1.8
Guards and Watch Guards	180	7.2	0.8
Janitors and Cleaners	190	34.3	0.8
Other Service Workers	50	NA	0.2
Agricultural, Forestry, or Fishery Workers	20	NA	0.1
Production and Maintenance Workers	16,740	NA	71.0
Mechanic and Repairer Supervisors	190	8.0	0.8
Production Supervisors	820	6.8	3.5
Transportation and Material Moving Supervisors	40	24.3	0.2
Laborer Supervisors	70	11.9	0.3
Production Inspectors	510	5.9	2.2
Machinery Maintenance Mechanics	1,970	3.5	8.4
Millwrights	120	20.2	0.5
Machinery Maintenance Workers	570	12.1	2.4
Maintenance Repairers, General Utility	340	32.2	1.4
Automotive Mechanics	20	8.3	0.1
Heating, Air Conditioning, and Refrigeration Mechanics	50	17.0	0.2
Other Mechanics, Installers, and Repairers	100	NA	0.4
Electricians	100	21.4	0.4
Plumbers and Pipefitters	80	10.7	0.3
Other Construction and Extractive Workers	30	NA	0.1
Machinists	270	6.2	1.1
Sheet Metal Workers	50	23.6	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Precision Food and Tobacco Workers	820	NA	3.5
Roasting and Related Machine Operators and Tenders	70	30.4	0.3
Crushing, Grinding, and Mixing Machine Operators and Tenders	120	30.5	0.5
Packaging and Filling Machine Operators and Tenders	1,920	6.0	8.1
Other Machine Setters and Set-up Operators	30	NA	0.1
Other Machine Operators and Tenders	3,440	NA	14.6
Truck Drivers, Heavy-inc. Tractor-Trailer	120	7.8	0.5
Truck Drivers, Light-inc. Delivery and Route Workers	120	9.4	0.5
Industrial Truck and Tractor Operators	890	5.4	3.8
Conveyor Operators and Tenders	20	27.2	0.1
Machine Feeders and Offbearers	100	16.3	0.7
Material Movers, Hand	120	26.0	0.5
Hand Packers and Packagers	100	14.5	0.4
Other Laborers	3,480	NA	14.8

1/ Details may not add to total due to rounding or data suppression.

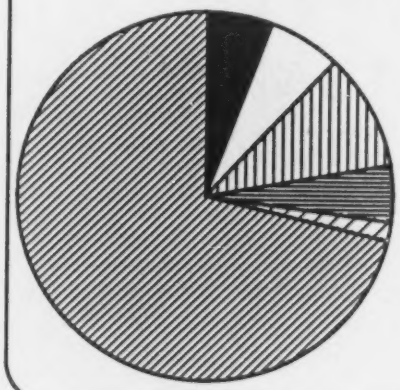
TABLE 2

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Machinery Maintenance Mechanics	1,970	8.4
Packaging and Filling Machine Operators and Tenders	1,920	8.1
Industrial Truck and Tractor Operators	890	3.8
Production Supervisors	820	3.5
Machinery Maintenance Workers	570	2.4

FIGURE 6

PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

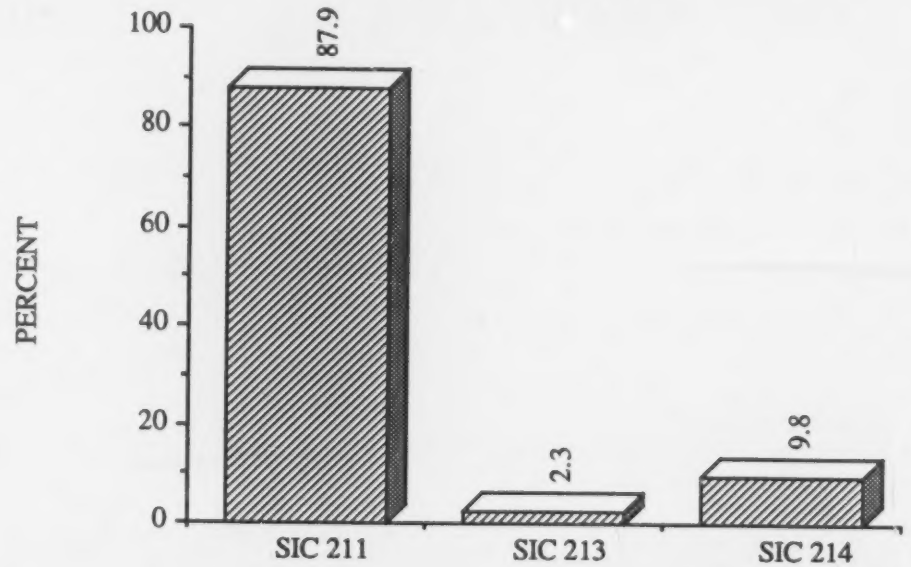


- Managers and Officers (5.6%)
- Professional and Technical Workers (6.4 %)
- Sales Workers (10.4%)
- Clerical Workers (4.8%)
- Service Workers (1.8%)
- Production and Maintenance Workers (71.0%)
- * Agricultural, Forestry, or Fishery Workers (0.1%)

*NOTE: (0.1% is too small to appear in graph).

FIGURE 7

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 22 and 23

TEXTILE MILL PRODUCTS, APPAREL, AND OTHER FINISHED PRODUCTS MADE FROM FABRICS

April 1986

Major group 22 includes establishments engaged in performing any of the following operations: (1) preparing fiber and manufacturing of yarn, thread, braids, twine, and cordage; (2) manufacturing broad and narrow woven fiber, knit fabric, and carpets and rugs from yarn; (3) dyeing and finishing fiber, yarn, fabric, and knit apparel; (4) coating, waterproofing, or otherwise treating fabric; (5) the integrated manufacture of knit apparel and other finished articles from yarn; and (6) the manufacture of felt and lace goods; nonwoven fabrics and miscellaneous textiles. This classification includes contract mills (processes materials owned by others) and integrated mills (buys raw materials, manufactures, and sells finished textile goods).

Major group 23 includes those establishments primarily engaged in producing clothing and fabricating products by cutting and sewing purchased woven or knit textile fabrics. Other materials used in clothing production such as leather, rubber, plastics, and furs are included in this group.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	288,910	NA	100.0
Managers and Officers	7,840	NA	2.7
Financial Managers	510	9.2	0.2
Personnel and Labor Relations Managers	500	7.0	0.2
Purchasing Managers	250	9.8	0.1
Marketing, Advertising, and Public Relations Managers	320	10.8	0.1
Administrative Service Managers	190	18.0	0.1
Engineering, Math, and Natural Science Managers	300	11.0	0.1
Industrial Production Managers	1,760	7.1	0.6
General Managers and Top Executives	2,860	7.6	1.0
Other Managers and Administrators	1,150	NA	0.4

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Professional and Technical Workers	5,780	NA	2.0
Accountants and Auditors	470	10.4	0.2
Purchasing Agents and Buyers, except Farm Products	230	9.2	0.1
Personnel and Labor Relations Specialists	330	10.0	0.1
Cost Estimators	200	10.5	0.1
Other Management Support Workers	320	NA	0.1
Industrial Engineers	680	4.7	0.2
Mechanical Engineers	280	10.7	0.1
Industrial Engineering Technicians and Technologists	490	6.2	0.2
Other Engineering Technicians and Technologists	230	NA	0.1
Other Physical Scientists	140	NA	0.1
Chemical Technicians and Technologists	450	11.0	0.2
EDP Systems Analysts	340	15.8	0.1
Computer Programmers	440	11.3	0.1
Computer Programmer Aides	140	20.5	0.1
Teachers and Instructors, Vocational Education	320	11.7	0.1
Other Health Professionals and Technicians	200	NA	0.1
Designers	220	15.6	0.1
Other Professional and Technical Workers	300	NA	0.1
Sales Workers	2,060	NA	0.7
Sales Supervisors	360	16.7	0.1
Sales Representatives, Scientific - except Retail	210	22.3	0.1
Sales Representatives, Nonscientific - except Retail	910	14.2	0.3
Salespersons, Retail	440	34.8	0.1
Other Sales and Related Workers	140	NA	0.1
Clerical Workers	21,300	NA	7.4
Clerical and Administrative Supervisors	980	8.0	0.3
Adjustment Clerks	580	13.4	0.2
Secretaries	2,370	7.1	0.8
Receptionists and Information Clerks	410	10.6	0.1
Typists	310	14.5	0.1
Personnel Clerks	530	6.8	0.2
File Clerks	140	15.5	0.1
Order Clerks	640	11.1	0.2
Procurement Clerks	190	11.5	0.1
Bookkeeping, Accounting, and Auditing Clerks	1,230	6.7	0.4
Payroll and Timekeeping Clerks	1,110	4.2	0.4
Billing, Cost, and Rate Clerks	660	10.9	0.2
General Office Clerks	1,760	7.4	0.6

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Billing, Posting, and Calculating Machine Operators	170	21.9	0.1
Computer Operators	440	9.9	0.2
Data Entry Keyers	690	7.8	0.2
Other Office Machine Operators	200	29.5	0.1
Switchboard Operators	250	8.5	0.1
Production, Planning, and Expediting Clerks	1,780	6.7	0.6
Weighers, Measurers, Checkers, and Samplers	640	14.3	0.2
Marking Clerks	200	26.7	0.1
Stock Clerks - Stockroom or Warehouse	1,870	8.6	0.6
Traffic, Shipping, and Receiving Clerks	2,860	6.7	1.0
Other Material Recording and Related Workers	780	NA	0.3
Other Clerical and Administrative Workers	510	NA	0.2
Service Workers	5,130	NA	1.8
Service Supervisors	500	20.2	0.2
Guards and Watch Guards	720	8.3	0.2
Janitors and Cleaners	3,240	5.2	1.1
Other Cleaning and Building Service Workers	510	NA	0.2
Other Service Workers	160	NA	0.1
Production and Maintenance Workers	246,650	NA	85.4
Mechanic and Repairer Supervisors	700	8.4	0.2
Production Supervisors	9,390	3.6	3.2
Transportation and Material Moving Supervisors	190	16.4	0.1
Laborer Supervisors	380	15.5	0.1
Other Supervisors	270	NA	0.1
Precision Inspectors, Testers, and Graders	690	29.5	0.2
Production Inspectors	13,810	5.7	4.8
Machinery Maintenance Mechanics, Textile Machines	7,160	10.2	2.5
Machinery Maintenance Mechanics, Sewing Machines	1,830	10.5	0.6
Other Machinery Maintenance Mechanics	800	NA	0.3
Millwrights	340	11.6	0.1
Machinery Maintenance Workers	1,030	10.3	0.3
Maintenance Repairers, General Utility	2,520	7.4	0.9
Heating, Air Conditioning, and Refrigeration Mechanics	500	13.1	0.2
Menders	1,040	15.8	0.4
Other Mechanics, Installers, and Repairers	420	NA	0.1
Carpenters	400	13.7	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Electricians	1,000	5.4	0.3
Painters and Paperhangers	150	9.8	0.1
Other Construction and Extractive Workers	250	NA	0.1
Machinists	510	8.6	0.2
Fabric and Apparel Patternmakers	650	14.6	0.2
Pressers	150	32.8	0.1
Precision Dyers	350	16.8	0.1
Other Precision Textile and Apparel Workers	570	NA	0.2
Screen Printing Machine Setters and Set-up Operators	340	20.3	0.1
Other Printing Setters and Set-up Operators	140	NA	0.1
Printing Press Machine Operators	600	30.1	0.2
Other Printing and Related Machine Operators and Tenders	220	NA	0.1
Textile Machine Setters and Set-up Operators	8,760	5.4	3.0
Textile Machine Operators and Tenders	55,820	3.4	19.3
Extruding and Forming Machine Operators and Tenders, Synthetic or Glass Fibers	1,630	17.8	0.6
Textile Draw-Out Machine Operators and Tenders	5,890	10.2	2.0
Textile Bleaching and Dyeing Machine Operators and Tenders	6,440	11.7	2.2
Sewing Machine Operators, Garment	50,410	4.3	17.4
Sewing Machine Operators, Non-Garment	10,390	14.2	3.6
Laundry and Dry Cleaning Machine Operators and Tenders	200	35.0	0.1
Pressing Machine Operators and Tenders	3,200	21.6	1.1
Furnace, Kiln, and Oven Operators and Tenders	690	19.1	0.2
Low Pressure Boiler Operators and Tenders	260	14.7	0.1
Cutting and Slicing Machine Setters and Set-up Operators	580	16.9	0.2
Cutting and Slicing Machine Operators and Tenders	650	24.5	0.2
Packaging and Filling Machine Operators and Tenders	1,000	17.8	0.3
Other Machine Setters and Set-up Operators	750	NA	0.2
Other Machine Operators and Tenders	3,270	NA	0.8
Pressers, Hand	880	18.5	0.3
Hand Sewers	1,580	35.0	0.5
Hand Cutters and Trimmers	1,990	16.1	0.7
Portable Machine Cutters	820	14.6	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	770	18.7	0.3
Other Hand Workers	7,260	NA	2.5
Truck Drivers, Heavy - inc. Tractor-Trailer	580	8.1	0.2
Truck Drivers, Light - inc. Delivery and Route Workers	290	14.3	0.1
Industrial Truck and Tractor Operators	2,700	6.5	0.9
Conveyor Operators and Tenders	220	21.5	0.1
Other Material Moving Equipment Operators	170	NA	0.1
Mechanic and Repairer Helpers	520	33.3	0.2
Machine Feeders and Offbearers	4,090	6.7	1.4
Material Movers, Hand	8,440	6.7	2.9
Hand Packers and Packagers	9,020	14.7	3.1
Other Laborers	10,980	NA	3.8

1/ Details may not add to total due to rounding or data suppression.

TABLE 3

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Textile Machine Operators and Tenders	55,820	19.3
Sewing Machine Operators, Garment	50,410	17.4
Production Inspectors	13,810	4.8
Sewing Machine Operators, Non-Garment	10,390	3.6
Production Supervisors	9,390	3.2

FIGURE 8

PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

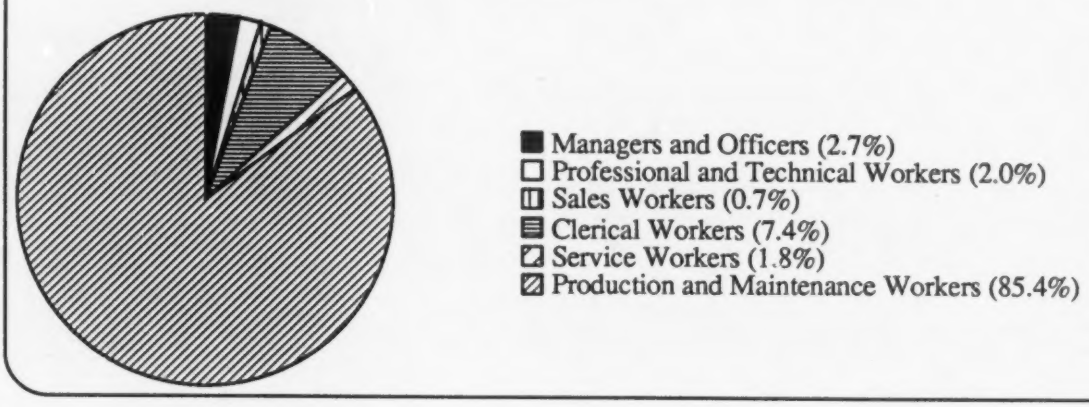
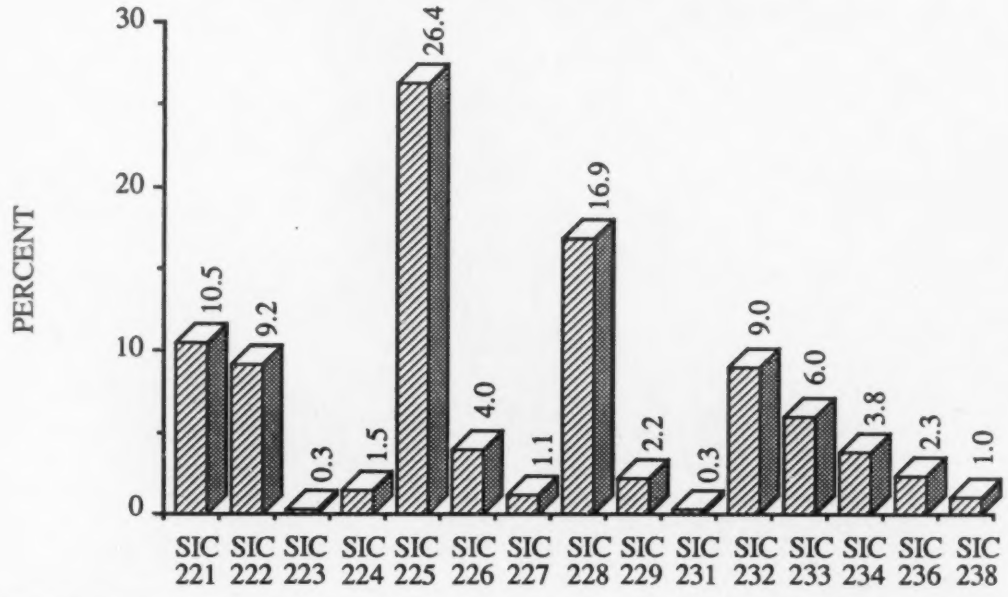


FIGURE 9

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 24

LUMBER AND WOOD PRODUCTS, EXCEPT FURNITURE
May 1986

Establishments in this group are primarily engaged in cutting timber and pulpwood; sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, plywood mills, and veneer mills. Also included in this category are establishments which manufacture finished articles made entirely or mainly of wood or wood substitutes.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	37,830	NA	100.0
Managers and Officers	1,640	NA	4.3
Financial Managers	60	7.7	0.2
Personnel and Labor Relations Managers	20	12.6	0.1
Purchasing Managers	40	9.6	0.1
Marketing, Advertising, and Public Relations Managers	30	12.0	0.1
Engineering, Math, and Natural Science Managers	20	20.3	0.1
Industrial Production Managers	280	10.6	0.7
General Managers and Top Executives	1,110	6.6	2.9
Other Managers and Administrators	80	NA	0.2
Professional and Technical Workers	500	NA	1.3
Accountants and Auditors	100	14.8	0.2
Purchasing Agents and Buyers, except Farm Products	120	9.4	0.3
Personnel and Labor Relations Specialists	20	14.6	0.1
Cost Estimators	60	18.9	0.2
Mechanical Engineers	20	32.7	0.1
Other Engineers	20	NA	0.1
Drafters	80	19.5	0.2
Other Professional and Technical Workers	80	NA	0.2
Sales Workers	640	NA	1.7
Sales Supervisors	40	18.9	0.1
Sales Representatives, Scientific - except Retail	100	3.1	0.2
Sales Representatives, Nonscientific - except Retail	380	10.9	1.0
Other Sales and Related Workers	120	NA	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Clerical Workers	2,150	NA	5.7
Clerical Supervisors and Administrators	50	12.1	0.1
Adjustment Clerks	20	14.3	0.1
Secretaries	560	7.9	1.5
Receptionists and Information Clerks	40	10.8	0.1
Typists	20	17.0	0.1
Order Clerks	30	21.9	0.1
Bookkeeping, Accounting, and Auditing Clerks	550	8.5	1.4
Payroll and Timekeeping Clerks	50	8.5	0.1
General Office Clerks	310	13.0	0.8
Data Entry Keyers	40	16.3	0.1
Production, Planning, and Expediting Clerks	40	18.6	0.1
Stock Clerks - Stockroom or Warehouse	80	16.9	0.2
Traffic, Shipping, and Receiving Clerks	270	9.7	0.7
Other Clerical and Administrative Workers	90	NA	0.2
Service Workers	580	NA	1.5
Guards and Watch Guards	210	8.7	0.6
Janitors and Cleaners	340	9.2	0.9
Other Service Workers	30	NA	0.1
Agricultural, Forestry, or Fishery Workers	3,830	NA	10.1
Supervisors	240	14.3	0.6
Fallers and Buckers	1,030	7.9	2.7
Choke Setters	120	26.9	0.3
Log Handling Equipment Operators	790	10.3	2.1
Logging Tractor Operators	1,210	6.9	3.2
Other Logging Workers	120	NA	0.3
Log Graders and Scalers	190	15.4	0.5
Other Agricultural, Forestry, or Fishery Workers	130	NA	0.3
Production and Maintenance Workers	28,410	NA	75.1
Mechanic and Repairer Supervisors	120	17.5	0.3
Production Supervisors	1,230	5.5	3.2
Laborer Supervisors	40	31.5	0.1
Other Supervisors	100	NA	0.3
Production Inspectors	730	7.1	1.9
Machinery Maintenance Mechanics	430	14.1	1.1
Millwrights	90	21.7	0.2
Machinery Maintenance Workers	150	16.9	0.4
Maintenance Repairers, General Utility	420	8.1	1.1
Automotive Mechanics	30	24.3	0.1
Bus, Truck, and Diesel Mechanics	40	29.7	0.1
Mobile Heavy Equipment Mechanics	40	22.2	0.1
Installers and Repairers, Mobile Homes and Trailers	120	17.8	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Carpenters	710	20.9	1.9
Electricians	290	10.8	0.8
Painters and Paperhangers	40	23.5	0.1
Plumbers and Pipefitters	240	15.4	0.6
Other Construction and Extractive Workers	250	NA	0.6
Precision Grinders, Filers, etc.	90	14.2	0.2
Sheet Metal Workers	170	21.3	0.4
Pattern and Model Makers, Wood	40	14.9	0.1
Wood Machinists	1,600	12.5	4.2
Cabinetmakers and Bench Carpenters	730	21.3	1.9
Furniture Finishers	140	35.0	0.4
Welding Machine Setters and Set-up Operators	40	16.4	0.1
Other Metal and Plastic Machine Operatiors and Tenders	150	NA	0.4
Sewing Machine Setters and Set-up Operators	600	16.6	1.6
Head Sawyers	290	11.2	0.8
Sewing Machine Operators	1,600	8.3	4.2
Woodworking Machine Setters and Set-up Operators	1,310	13.6	3.5
Woodworking Machine Operators and Tenders	1,620	10.3	4.3
Sewing Machine Operators, Non-Garment	50	27.7	0.1
Furnace, Kiln, and Oven Operators	440	12.6	1.2
Low Pressure Boiler Operators and Tenders	90	12.3	0.2
Painting and Related Machine Setters and Set-up Operators	140	26.4	0.4
Painting and Related Machine Operators and Tenders	240	21.3	0.6
Cementing and Gluing Machine Operators and Tenders	360	17.9	1.0
Crushing, Grinding, and Mixing Machine Operators and Tenders	30	19.8	0.1
Packaging and Filling Machine Operators and Tenders	100	17.1	0.3
Other Machine Setters and Set-up Operators	150	NA	0.4
Other Machine Operators and Tenders	330	NA	0.9
Welders and Cutters	50	15.8	0.1
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	3,660	8.6	9.7
Other Hand Workers	570	NA	1.5
Truck Drivers, Heavy-inc. Tractor -Trailer	1,410	6.5	3.7
Other Transportation Workers	60	NA	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Hoist and Winch Operators	60	28.6	0.2
Industrial Truck and Tractor Operators	960	6.7	2.5
Conveyor Operators and Tenders	50	33.4	0.1
Other Material Moving Equipment Operators and Tenders	30	NA	0.1
Mechanic and Repairer Helpers	30	21.9	0.1
Construction Trades Helpers	90	27.8	0.2
Machine Feeders and Offbearers	2,300	8.7	6.1
Material Movers, Hand	1,900	10.1	5.0
Hand Packers and Packagers	340	12.8	0.9
Other Laborers	1,520	NA	4.1

1/ Details may not add to total due to rounding or data suppression.

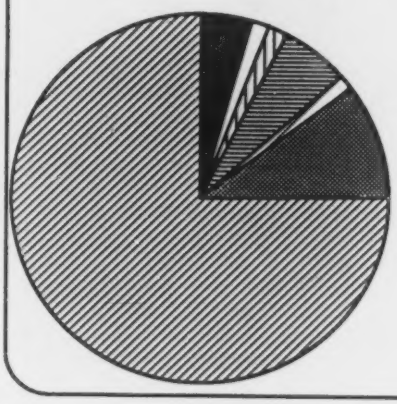
TABLE 4

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic, and Precision	3,660	9.7
Machine Feeders and Offbearers	2,300	6.1
Material Movers, Hand	1,900	5.0
Woodworking Machine Operators and Tenders	1,620	4.3
Woodworking Machinists	1,600	4.2

FIGURE 10

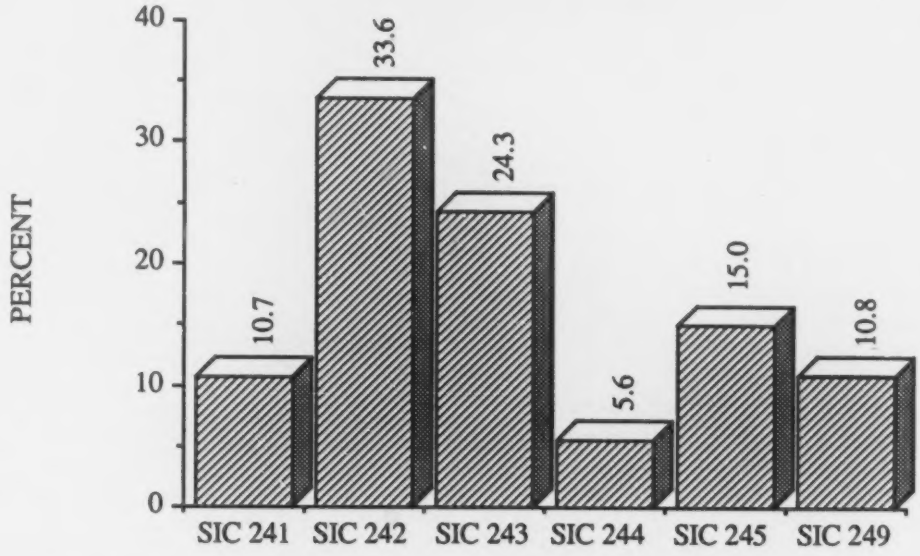
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY



- Managers and Officers (4.3%)
- Professional and Technical Workers (1.3%)
- Sales Workers (1.7%)
- Clerical Workers (5.7%)
- Service Workers (1.5%)
- Agricultural, Forestry, or Fishery Workers (10.1%)
- Production and Maintenance Workers (75.1%)

FIGURE 11

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 26

PAPER AND ALLIED PRODUCTS
April 1986

This major group includes establishments primarily engaged in the manufacture of pulps from wood, cellulose fibers, and rags; the manufacture of paper and paperboard into converted products such as paper bags, boxes, and envelopes. It does not include abrasive paper, carbon paper, photosensitized or blueprint paper.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	21,530	NA	100.0
Managers and Officers	900	NA	4.2
Financial Managers	80	7.4	0.4
Personnel and Labor Relations Managers	40	7.3	0.2
Purchasing Managers	20	13.4	0.1
Marketing, Advertising, and Public Relations Managers	50	9.3	0.2
Administrative Service Managers	20	20.8	0.1
Engineering, Math, and Natural Science Managers	30	13.3	0.1
Industrial Production Managers	280	7.4	1.3
General Managers and Top Executives	320	6.3	1.5
Other Managers and Administrators	60	NA	0.3
Professional and Technical Workers	710	NA	3.3
Accountants and Auditors	70	9.0	0.3
Purchasing Agents and Buyers, except Farm Products	40	16.3	0.2
Personnel and Labor Relations Specialists	40	11.8	0.2
Cost Estimators	40	18.5	0.2
Other Management Support Workers	30	NA	0.1
Chemical Engineers	70	4.9	0.3
Industrial Engineers	40	7.4	0.2
Mechanical Engineers	60	4.1	0.3
Other Engineers	40	NA	0.1
Industrial Engineering Technicians and Technologists	40	14.5	0.2
Drafters	20	18.5	0.1
Other Engineering Technicians and Technologists	30	NA	0.1
Chemists	40	8.4	0.2
Chemical Technicians and Technologists	60	16.4	0.3
EDP Systems Analysts	30	9.7	0.1
Computer Programmers	20	14.5	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Health Professionals and Technicians	20	NA	0.1
Other Professional and Technical Workers	20	NA	0.1
Sales Workers	510	NA	2.4
Sales Supervisors	40	18.1	0.2
Sales Representatives, Scientific - except Retail	40	34.5	0.2
Sales Representatives, Nonscientific - except Retail	380	8.4	1.8
Other Sales and Related Workers	50	NA	0.2
Clerical Workers	1,830	NA	8.5
Clerical and Administrative Supervisors	90	14.9	0.4
Adjustment Clerks	80	12.2	0.4
Secretaries	290	4.6	1.4
Receptionists and Information Clerks	30	13.1	0.1
Typists	40	20.0	0.2
Personnel Clerks	30	8.8	0.1
Order Clerks	100	17.0	0.4
Procurement Clerks	20	12.0	0.1
Bookkeeping, Accounting, and Auditing Clerks	170	8.8	0.8
Payroll and Timekeeping Clerks	60	8.4	0.3
Billing, Cost, and Rate Clerks	60	8.3	0.3
General Office Clerks	70	16.9	0.3
Billing, Posting, and Calculating Machine Operators	30	21.5	0.1
Computer Operators	30	12.5	0.2
Data Entry Keyers	30	10.0	0.1
Switchboard Operators	20	13.1	0.1
Production, Planning, and Expediting Clerks	200	11.1	0.9
Weighers, Measurers, Checkers, and Samplers	50	22.1	0.2
Stock Clerks - Stockroom or Warehouse	100	7.8	0.4
Traffic, Shipping, and Receiving Clerks	230	8.8	1.1
Other Clerical and Administrative Workers	100	NA	0.5
Service Workers	260	NA	1.2
Guards and Watch Guards	50	13.8	0.2
Janitors and Cleaners	170	8.2	0.8
Other Service Workers	40	NA	0.2
Agricultural, Forestry, or Fishery Workers	190	NA	0.8
Production and Maintenance Workers	17,070	NA	79.3
Mechanic and Repairer Supervisors	150	9.2	0.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Production Supervisors	860	3.6	4.0
Transportation and Material Moving Supervisors	40	12.5	0.2
Laborer Supervisors	60	23.1	0.3
Precision Inspectors, Testers, and Graders	60	12.8	0.3
Production Inspectors	450	10.7	2.1
Machinery Maintenance Mechanics, Water or Power Generation Plants	120	11.5	0.5
Other Machinery Maintenance Mechanics	220	NA	1.0
Millwrights	290	15.5	1.4
Machinery Maintenance Workers	160	12.8	0.7
Maintenance Repairers, General Utility	320	7.5	1.5
Automotive Mechanics	20	24.7	0.1
Bus, Truck, and Diesel Mechanics	20	16.9	0.1
Precision Instrument Repairers	150	6.3	0.7
Other Mechanics, Installers, and Repairers	60	NA	0.3
Carpenters	30	11.1	0.2
Electricians	180	7.3	0.8
Painters and Paperhangers	50	15.1	0.2
Other Construction and Extractive Workers	200	NA	0.9
Tool and Die Makers	80	16.7	0.4
Machinists	100	11.4	0.5
Other Metal and Plastic Machine Operators and Tenders	50	NA	0.2
Printing Press Machine Setters and Set-up Operators	380	22.1	1.7
Specialty Printing Machine Setters and Set-up Operators	160	22.2	0.7
Other Printing Machine Setters and Set-up Operators	40	NA	0.2
Printing Press Machine Operators and Tenders	780	10.7	3.6
Other Printing and Related Machine Operators and Tenders	70	NA	0.3
Paper Goods Machine Setters and Set-up Operators	1,210	13.9	5.6
Low Pressure Boiler Operators and Tenders	120	22.6	0.5
Chemical Equipment Controllers and Operators	140	22.7	0.7
Chemical Equipment Tenders	260	10.4	1.2
Cutting and Slicing Machine Setters and Set-up Operators	310	12.3	1.4
Cutting and Slicing Machine Operators and Tenders	870	9.7	4.1
Painting and Related Machine Operators and Tenders	180	19.8	0.8

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Cementing and Gluing Machine Operators and Tenders	480	12.2	2.2
Cleaning, Washing, and Pickling Equipment Tenders and Operators	60	17.0	0.3
Crushing, Grinding, and Mixing Machine Operators and Tenders	290	14.3	1.3
Extruding, Forming, and Pressing Machine Setters and Set-up Operators	40	8.5	0.2
Extruding, Forming, and Pressing Machine Operators and Tenders	260	15.8	1.2
Packaging and Filling Machine Operators and Tenders	140	19.2	0.6
Other Machine Setters and Set-up Operators	260	NA	1.2
Other Machine Operators and Tenders	2,420	NA	11.2
Welders and Cutters	110	13.7	0.5
Other Hand Workers	130	NA	0.6
Waste Treatment Plant and System Operators	30	13.9	0.1
Other Plant and System Operators	120	NA	0.6
Truck Drivers, Heavy-inc. Tractor-Trailer	360	11.6	1.7
Truck Drivers, Light-inc. Delivery and Route Workers	70	18.0	0.3
Crane and Tower Operators	30	24.0	0.1
Industrial Truck and Tractor Operators	520	9.4	2.4
Conveyor Operators and Tenders	50	17.5	0.2
Other Material Moving Equipment Operators and Tenders	20	NA	0.1
Mechanic and Repairer Helpers	50	16.3	0.2
Machine Feeders and Offbearers	1,260	9.8	5.8
Material Movers, Hand	370	8.9	1.7
Hand Packers and Packagers	820	18.9	3.8
Other Laborers	1090	NA	5.1

1/ Details may not add to total due to rounding or data suppression.

TABLE 5

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Machine Feeders and Offbearers	1,260	5.8
Paper Goods Machine Setters and Set-up Operators	1,210	5.6
Cutting and Slicing Machine Operators and Tenders	870	4.1
Production Supervisors	860	4.0
Hand Packers and Packagers	820	3.8

FIGURE 12

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

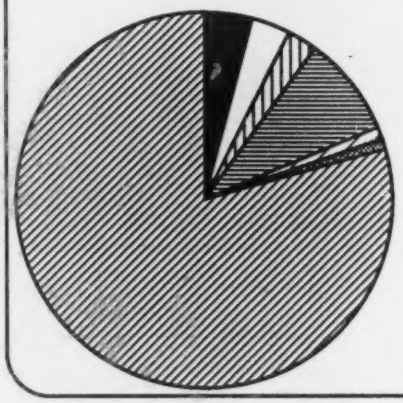
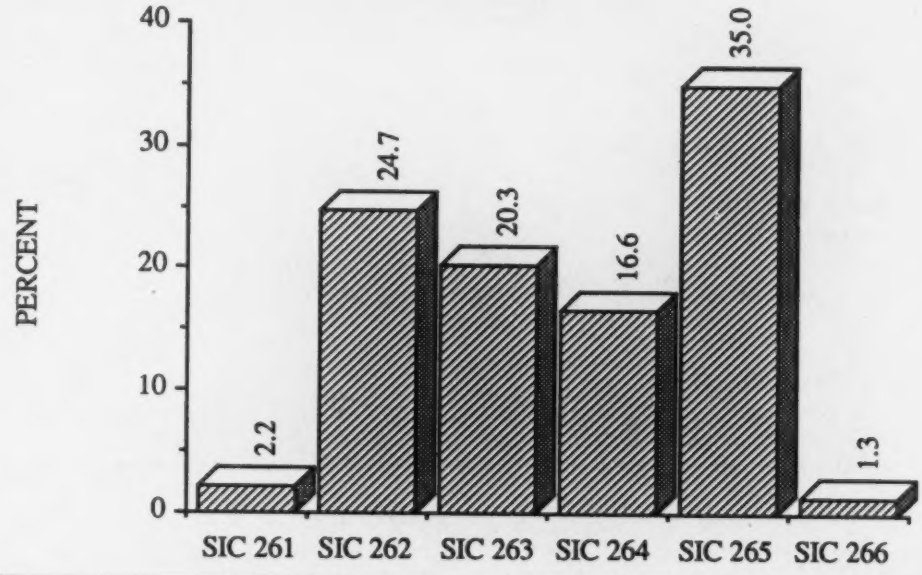

Managers and Officers (4.2%)
Professional and Technical Workers (3.3%)
Sales Workers (2.4%)
Clerical Workers (8.5%)
Service Workers (1.2%)
Agricultural, Forestry, or Fishery Workers (0.8%)
Production and Maintenance Workers (79.3%)

FIGURE 13
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 27

Except 271,273 and 276

PRINTING, PUBLISHING, AND ALLIED INDUSTRIES
May 1986

This major group includes establishments engaged in printing by one or more of the common processes, such as letterpress, lithography, gravure, or screen; and those establishments which perform services for the printing trade, such as bookbinding, typesetting, engraving, photoengraving, and electrotyping.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	14,480	NA	100.0
Managers and Officers	1,230	NA	8.5
Financial Managers	40	12.9	0.3
Personnel and Labor Relations Managers	20	11.7	0.2
Purchasing Managers	20	13.4	0.1
Marketing, Advertising, and Public Relations Managers	180	19.5	1.2
Engineering, Math, and Natural Science Managers	20	21.9	0.1
Industrial Production Managers	220	14.8	1.5
General Managers and Top Executives	660	8.2	4.6
Other Managers and Administrators	70	NA	0.5
Professional and Technical Workers	980	NA	6.7
Accountants and Auditors	20	14.8	0.1
Purchasing Agents and Buyers, except Farm Products	30	18.6	0.2
Cost Estimators	80	20.2	0.6
Other Management Support Workers	40	NA	0.3
Other Engineering Technicians and Technologists	50	NA	0.3
Computer Programmers	40	31.2	0.3
Writers and Editors	100	29.1	0.7
Artists and Related Workers	220	22.8	1.5
Designers	270	20.7	1.8
Other Professional and Technical Workers	130	NA	0.9
Sales Workers	1,250	NA	8.6
Sales Supervisors	160	25.0	1.1
Sales Agents, Advertising	590	7.8	4.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Sales Representatives, Nonscientific - except Retail	440	21.0	3.0
Other Sales and Related Workers	60	NA	0.4
Clerical Workers	2,620	NA	18.1
Clerical and Administrative Supervisors	140	19.7	1.0
Adjustment Clerks	120	24.8	0.8
Proofreaders and Copy Markers	180	21.4	1.2
Secretaries	460	10.8	3.2
Receptionists and Information Clerks	110	21.0	0.7
Order Clerks	130	25.0	0.9
Bookkeeping, Accounting, and Auditing Clerks	320	12.6	2.2
Payroll and Timekeeping Clerks	20	11.1	0.1
General Office Clerks	210	22.5	1.4
Mail Machine Operators	40	29.5	0.3
Data Entry Keyers	40	28.6	0.3
Data Keyers, Composing	130	29.2	0.9
Other Office Machine Operators	40	NA	0.3
Switchboard Operators	20	19.8	0.1
Mail Clerks, except Mail Machine Operators and Postal Clerks	40	33.7	0.3
Production, Planning, and Expediting Clerks	170	20.8	1.2
Stock Clerks - Stockroom or Warehouse	60	22.2	0.4
Traffic, Shipping, and Receiving Clerks	200	14.8	1.4
Other Clerical and Administrative Workers	190	NA	1.3
Service Workers	100	NA	0.6
Janitors and Cleaners	60	16.4	0.4
Other Cleaning and Building Service Workers	40	NA	0.2
Production and Maintenance Workers	8,330	NA	57.5
Production Supervisors	340	9.8	2.3
Other Supervisors	40	NA	0.2
Production Inspectors	140	18.5	0.9
Machinery Manintenance Mechanics	50	16.1	0.3
Maintenance Repairers, General Utility	50	19.7	0.3
Electricians	20	31.6	0.1
Other Precision Metal Workers	50	NA	0.3
Precision Compositors	140	29.5	0.9
Job Printers	250	30.3	1.7
Precision Lithography and Photoengraving Workers	560	11.3	3.8
Other Precision Printing Workers	110	NA	0.7
Precision Detail Design Decorators and Painters	100	34.6	0.6
Other Precision Workers	40	NA	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Offset Lithographic Press Setters and Set-up Operators	1,060	10.0	7.3
Letterpress Setters and Set-up Operators	240	17.6	1.6
Other Printing Press Setters and Set-up Operators	430	NA	2.9
Photoengraving and Lithographing Photographers	200	16.0	1.3
Specialty Materials Printing Machine Setters and Set-up Operators	40	28.3	0.2
Bindery Machine Setters and Set-up Operators	310	20.6	2.1
Other Printing Related Setters and Set-up Operators	150	NA	1.0
Typesetting and Composing Machine Operators and Tenders	220	17.6	1.5
Printing Press Machine Operators and Tenders	790	16.3	5.4
Bindery Machine Operators	430	12.7	2.9
Other Printing, Binding, and Related Machine Operators and Tenders	250	NA	1.7
Cutting and Slicing Machine Setters and Set-up Operators	70	28.6	0.4
Cutting and Slicing Machine Operators and Tenders	160	11.6	1.1
Cementing and Gluing Machine Operators and Tenders	60	19.0	0.4
Packaging and Filling Machine Operators and Tenders	20	32.2	0.1
Other Machine Setters and Set-up Operators	80	NA	0.5
Other Machine Operators and Tenders	190	NA	1.3
Other Hand Workers	450	NA	3.1
Truck Drivers, Light-inc. Delivery and Route Workers	150	14.5	1.0
Other Transportation Workers	110	NA	0.7
Machine Feeders and Offbearers	530	13.2	3.6
Material Movers, Hand	90	27.1	0.6
Hand Packers and Packagers	220	21.7	1.5
Other Laborers	190	NA	1.3

1/ Details may not add to total due to rounding or data suppression.

TABLE 6

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Offset Lithographic Press Setters and Set-up Operators	1,060	7.3
Printing Press Machine Operators and Tenders	790	5.4
General Managers and Top Executives	660	4.6
Sales Agents, Advertising	590	4.1
Precision Lithography and Photoengraving Workers	560	3.8

FIGURE 14

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

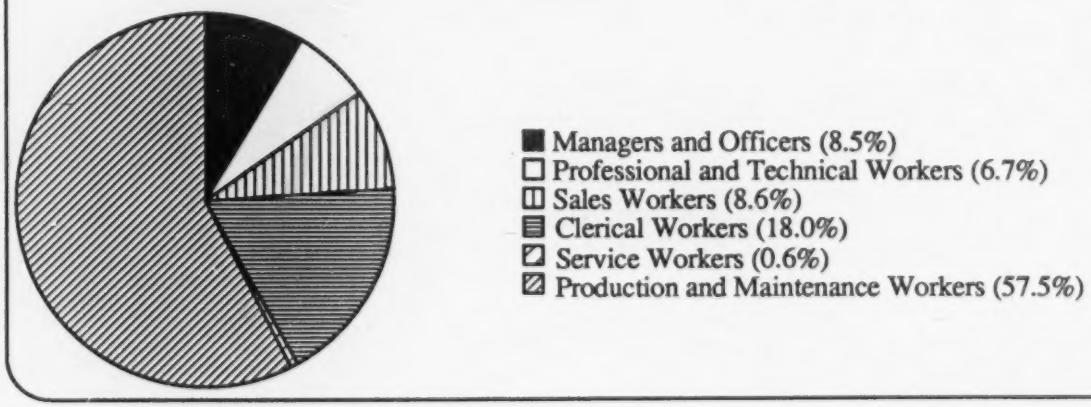
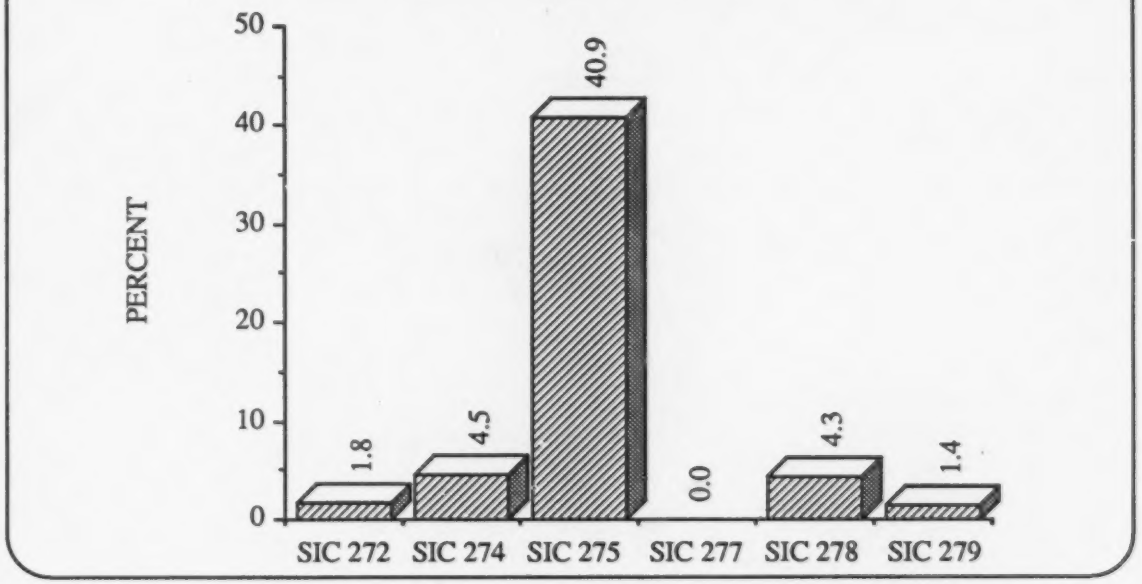


FIGURE 15

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 28

Except 287 and 289

CHEMICALS AND ALLIED PRODUCTS
June 1986

This major group includes those establishments primarily engaged in the production of products made predominantly by chemical processes. The production of basic chemicals, chemical products to be further manufactured, the finished chemical products to be used for consumption, as in soap or drugs, are also included in this category.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	32,790	NA	100.0
Managers and Officers	1,520	NA	4.6
Financial Managers	80	10.2	0.2
Personnel and Labor Relations Managers	70	5.5	0.2
Purchasing Managers	40	5.7	0.1
Marketing, Advertising, and Public Relations Managers	150	7.6	0.5
Engineering, Math, and Natural Science Managers	80	13.6	0.3
Industrial Production Managers	280	7.6	0.9
General Managers and Top Executives	380	3.9	1.1
Other Managers and Administrators	440	NA	1.3
Professional and Technical Workers	3,800	NA	11.6
Accountants and Auditors	150	7.2	0.5
Budget Analysts	50	6.1	0.2
Other Financial Specialists	20	NA	0.1
Purchasing Agents and Buyers - except Farm Products	120	5.0	0.4
Personnel and Labor Relations Specialists	90	2.8	0.3
Other Management Support Workers	280	NA	0.8
Chemical Engineers	430	2.2	1.3
Electrical and Electronic Engineers	80	8.2	0.2
Industrial Engineers	70	11.4	0.2
Safety Engineers	20	13.2	0.1
Mechanical Engineers	190	12.0	0.6
Other Engineers	70	NA	0.2
Electrical and Electronic Engineering Technicians and Technologists	80	27.5	0.2
Industrial Engineering Technicians and Technologists	20	27.3	0.1
Drafters	40	8.7	0.1
Other Engineering Technicians and Technologists	210	NA	0.6

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Chemists	490	10.0	1.5
Other Physical Scientists	20	NA	0.1
Other Life Scientists	90	NA	0.3
Biological, Agricultural, and Food Technicians and Technologists	60	34.4	0.2
Chemical Technicians and Technologists	770	6.5	2.3
Other Science Technicians and Technologists	110	NA	0.3
EDP Systems Analysts	80	6.8	0.2
Computer Programmers	80	6.5	0.2
Computer Programmer Aides	20	10.0	0.1
Registered Nurses	40	8.8	0.1
Other Professional and Technical Workers	120	NA	0.4
Sales Workers	880	NA	2.7
Sales Supervisors	70	16.9	0.2
Sales Engineers	70	16.2	0.2
Sales Representatives, Scientific - except Retail	390	18.5	1.2
Sales Representatives, Nonscientific - except Retail	270	19.3	0.8
Other Sales and Related Workers	80	NA	0.2
Clerical Workers	3,230	NA	9.9
Clerical and Administrative Supervisors	140	9.4	0.4
Adjustment Clerks	70	12.5	0.2
Secretaries	590	5.0	1.8
Stenographers	50	19.7	0.1
Receptionists and Information Clerks	20	14.4	0.1
Typists	60	5.8	0.2
Typists, Word Processing	60	19.1	0.2
Personnel Clerks	80	6.1	0.2
File Clerks	30	28.9	0.1
Order Clerks	120	9.0	0.4
Procurement Clerks	90	12.8	0.3
Bookkeeping, Accounting, and Auditing Clerks	310	5.4	0.9
Payroll and Timekeeping Clerks	60	5.1	0.2
Billing, Cost, and Rate Clerks	70	16.5	0.2
General Office Clerks	350	8.9	1.1
Computer Operators	90	4.8	0.3
Data Entry Keyers	110	19.0	0.3
Other Office Machine Operators	20	NA	0.1
Switchboard Operators	30	11.3	0.1
Production, Planning, and Expediting Clerks	240	10.7	0.7
Weighers, Measurers, Checkers, and Samplers	20	28.5	0.1
Stock Clerks - Stockroom or Warehouse	230	15.5	0.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Traffic, Shipping, and Receiving Clerks	240	7.4	0.7
Other Material Recording and Related Workers	20	NA	0.1
Other Clerical and Administrative Workers	130	NA	0.4
Service Workers	490	NA	1.5
Service Supervisors	30	12.0	0.1
Guards and Watch Guards	60	13.6	0.2
Janitors and Cleaners	350	6.4	1.1
Other Cleaning and Building Service Workers	50	NA	0.1
Agricultural, Forestry, or Fishery Workers	100	NA	0.3
Production and Maintenance Workers	22,770	NA	69.4
Mechanic and Repairer Supervisors	170	9.9	0.5
Production Supervisors	1,340	5.6	4.1
Transportation and Material Moving Supervisors	60	19.8	0.2
Precision Inspectors, Testers, and Graders	380	4.6	1.2
Production Inspectors	940	4.3	2.9
Machinery Maintenance Mechanics, Water or Power Generation Plant	40	25.4	0.1
Other Machinery Maintenance Mechanics	1,380	NA	4.2
Maintenance Repairers, General Utility	400	8.4	1.2
Heating, Air Conditioning, and Refrigeration Machanics	40	12.5	0.1
Precision Instrument Repairers	90	15.3	0.3
Other Mechanics, Installers, and Repairers	310	NA	0.9
Carpenters	20	11.7	0.1
Electricians	150	6.5	0.5
Painters and Paperhangers	20	24.8	0.1
Plumbers and Pipefitters	50	8.8	0.1
Other Construction and Extractive Workers	30	NA	0.1
Machinists	490	0.6	1.5
Other Precision Metal Workers	60	NA	0.2
Textile Machine Setters and Set-up Operators	410	34.9	1.3
Textile Machine Operators and Tenders	920	18.6	2.8
Synthetic or Glass Fibers Extruding Machine Operators and Tenders	1,690	6.7	5.2
Textile Draw-out Machine Operators and Tenders	190	0.2	0.6
Furnace, Kiln, or Oven Operators and Tenders	100	30.8	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Low Pressure Boiler Operators and Tenders	50	18.3	0.1
Chemical Equipment Controllers and Operators	1,540	10.3	4.7
Chemical Equipment Tenders	440	27.4	1.4
Crushing, Grinding, and Mixing Operators and Tenders	620	8.1	1.9
Extruding, Forming, and Pressing Machine Setters and Set-up Operators	80	13.7	0.2
Extruding, Forming, and Pressing Machine Operators and Tenders	110	23.7	0.3
Packaging and Filling Machine Operators and Tenders	3,200	1.7	9.8
Other Machine Setters and Set-up Operators	480	NA	1.4
Other Machine Operators and Tenders	1,940	NA	5.9
Welders and Cutters	80	0.5	0.2
Other Hand Workers	980	NA	3.0
Waste Treatment Plant Operators	100	14.7	0.3
Chemical Plant and System Operators	260	15.1	0.8
Other Plant and System Operators	80	NA	0.2
Truck Drivers, Heavy - inc. Tractor-Trailer	240	10.5	0.7
Truck Drivers, Light - inc. Delivery and Route Workers	20	20.1	0.1
Industrial Truck and Tractor Operators	630	3.0	1.9
Other Material Moving Equipment Operators	150	NA	0.5
Mechanic and Repairer Helpers	50	15.9	0.1
Machine Feeders and Offbearers	250	11.4	0.7
Material Movers, Hand	770	13.0	2.4
Hand Packers and Packagers	530	18.1	1.6
Other Laborers	890	NA	2.7

1/ Details may not add to total due to rounding or data suppression.

TABLE 7
THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Packaging and Filling Machine Operators and Tenders	3,200	9.8
Synthetic or Glass Fibers Extruding Machine Operators and Tenders	1,690	5.2
Chemical Equipment Controllers and Operators	1,540	4.7
Production Supervisors	1,340	4.1
Production Inspectors	940	2.9

FIGURE 16
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

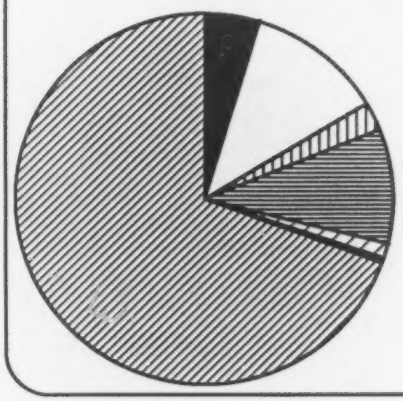
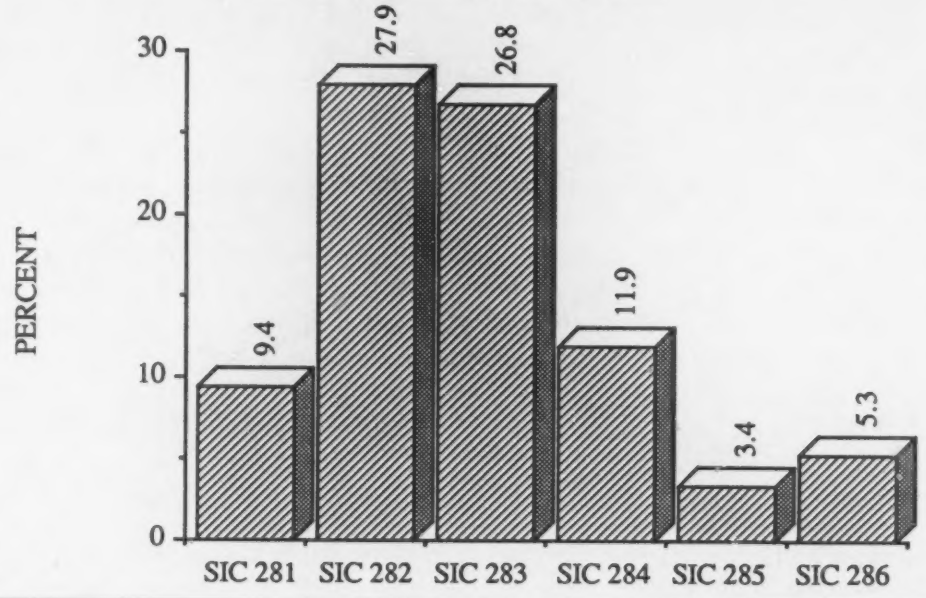

Managers and Officers (4.6%)
Professional and Technical Workers (11.6%)
Sales Workers (2.6%)
Clerical Workers (9.9 %)
Service Workers (1.5%)
Agricultural, Forestry, or Fishery Workers (0.3%)
Production and Maintenance Workers (69.4%)

FIGURE 17
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 30

Except 307

RUBBER AND MISCELLANEOUS PLASTICS PRODUCTS

June 1986

Establishments engaged in the manufacture of rubber tires, rubber footwear, mechanical rubber goods, heels and soles, flooring, and rubber sundries are included in this major group. Tire manufacturing, but not recapping or retreading of tires, is included in this category. These firms manufacture from natural, synthetic, or reclaimed rubber, gutta percha, balata, or gutta siak. This group also includes the manufacture of plastic footwear, plastic hoses, and plastic belting.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	13,130	NA	100.0
Managers and Officers	390	NA	3.0
Financial Managers	20	10.5	0.1
Personnel and Labor Relations Managers	20	8.0	0.1
Engineering, Math, and Natural Science Managers	20	14.4	0.2
Industrial Production Managers	120	4.8	1.0
General Managers and Top Executives	120	7.2	0.9
Other Managers and Administrators	90	NA	0.7
Professional and Technical Workers	450	NA	3.4
Accountants and Auditors	30	10.2	0.2
Other Financial Specialists	20	NA	0.1
Purchasing Agents and Buyers, except Farm Products	20	13.3	0.2
Personnel and Labor Relations Specialists	20	7.7	0.1
Chemical Engineers	20	9.5	0.1
Electrical and Electronic Engineers	20	14.7	0.2
Industrial Engineers	50	15.7	0.4
Mechanical Engineers	30	10.0	0.2
Other Engineers	20	NA	0.1
Industrial Engineering Technicians and Technologists	20	11.1	0.2
Other Engineering Technicians and Technologists	40	NA	0.4
Chemists	20	8.7	0.1
Chemical Technicians and Technologists	50	25.5	0.4
Other Science Technicians and Technologists	20	NA	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Professional and Technical Workers	70	NA	0.6
Sales Workers	70	NA	0.5
Sales Representative, Scientific - except Retail	50	15.8	0.4
Other Sales and Related Workers	20	NA	0.1
Clerical Workers	650	NA	5.0
Secretaries	90	8.0	0.7
Typists	40	19.0	0.3
Order Clerks	20	13.1	0.1
Bookkeeping, Accounting, and Auditing Clerks	50	9.8	0.4
Payroll and Timekeeping Clerks	20	12.7	0.2
General Office Clerks	40	12.2	0.3
Computer Operators	20	15.7	0.1
Data Entry Keyers	20	9.3	0.2
Production, Planning, and Expediting Clerks	100	7.1	0.7
Stock Clerks - Stockroom or Warehouse	40	10.1	0.3
Traffic, Shipping, and Receiving Clerks	110	5.7	0.8
Other Clerical and Administrative Workers	100	NA	0.8
Service Workers	120	NA	0.9
Service Supervisors	20	5.4	0.1
Guards and Watch Guards	30	30.4	0.2
Janitors and Cleaners	70	6.0	0.6
Production and Maintenance Workers	11,450	NA	87.2
Mechanic and Repairer Supervisors	60	19.6	0.4
Production Supervisors	620	7.5	4.7
Transportation and Material Moving Supervisors	100	3.5	0.8
Other Supervisors	120	NA	1.0
Precision Inspectors, Testers, and Graders	50	14.6	0.4
Production Inspectors	300	12.9	2.3
Machinery Maintenance Mechanics	300	22.7	2.3
Millwrights	70	21.1	0.5
Machinery Maintenance Workers	60	14.5	0.5
Maintenance Repairers, General Utility	220	18.7	1.7
Other Mechanics, Installers, and Repairers	170	NA	1.3
Electricians	30	4.8	0.2
Other Construction and Extractive Workers	30	NA	0.2
Machinists	70	25.5	0.5

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Precision Metal Workers	20	NA	0.1
Other Metal and Plastic Machine Setters and Set-up Operators	40	NA	0.3
Other Metal and Plastic Machine Operators and Tenders	130	NA	0.9
Textile Machine Operators and Tenders	210	32.2	1.6
Sewing Machine Operators, Non-Garment	110	23.6	0.8
Tire Building Machine Operators	1,790	11.3	13.6
Furnace, Kiln, or Oven Operators and Tenders	110	13.5	0.8
Cutting and Slicing Machine Operators and Tenders	320	9.3	2.4
Cementing and Gluing Machine Operators and Tenders	180	29.3	1.4
Crushing, Grinding, and Mixing Machine Operators and Tenders	550	15.7	4.2
Extruding, Forming, and Pressing Machine Setters and Set-up Operators	60	12.0	0.5
Extruding, Forming, and Pressing Machine Operators and Tenders	420	12.7	3.2
Other Machine Setters and Set-up Operators	290	NA	2.2
Other Machine Operators and Tenders	1,010	NA	7.7
Cutters and Trimmers, Hand	150	15.6	1.2
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	970	3.7	7.4
Other Hand Workers	330	NA	2.6
Other Plant and System Operators	50	NA	0.4
Truck Drivers, Heavy - incl. Tractor-Trailer	70	20.3	0.5
Truck Drivers, Light - incl. Delivery and Route Workers	30	29.2	0.2
Industrial Truck and Tractor Operators	330	16.4	2.5
Machine Feeders and Offbearers	380	10.2	2.9
Material Movers, Hand	420	8.9	3.2
Hand Packers and Packagers	100	10.8	0.8
Other Laborers	1,180	NA	9.0

1/ Details may not add to total due to rounding or data suppression.

TABLE 8

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Occupation	Percent of Total Employment
Tire Building Machine Operators	1,790	13.6
Assemblers and Fabricators - except Machine, Electrical, Electronic and Precision	970	7.4
Production Supervisors	620	4.7
Crushing, Grinding, and Mixing Machine Operators and Tenders	550	4.2
Extruding, Forming, and Pressing Machine Operators and Tenders	420	3.2

FIGURE 18

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

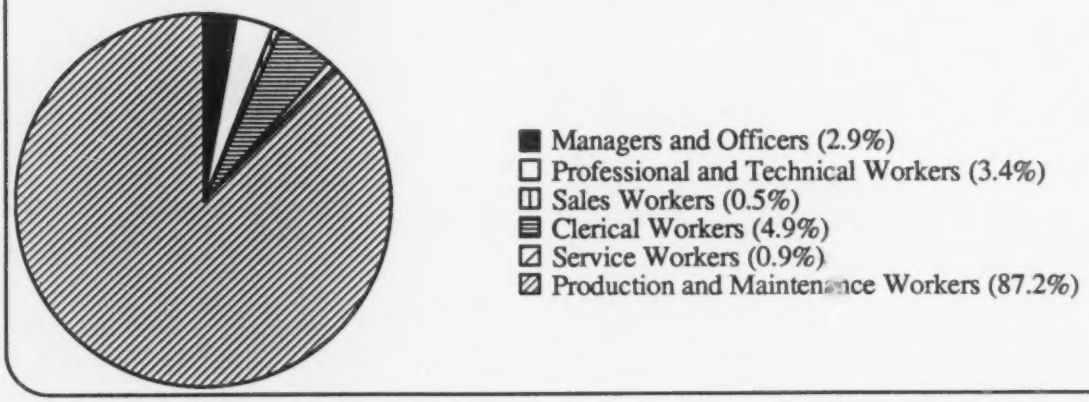
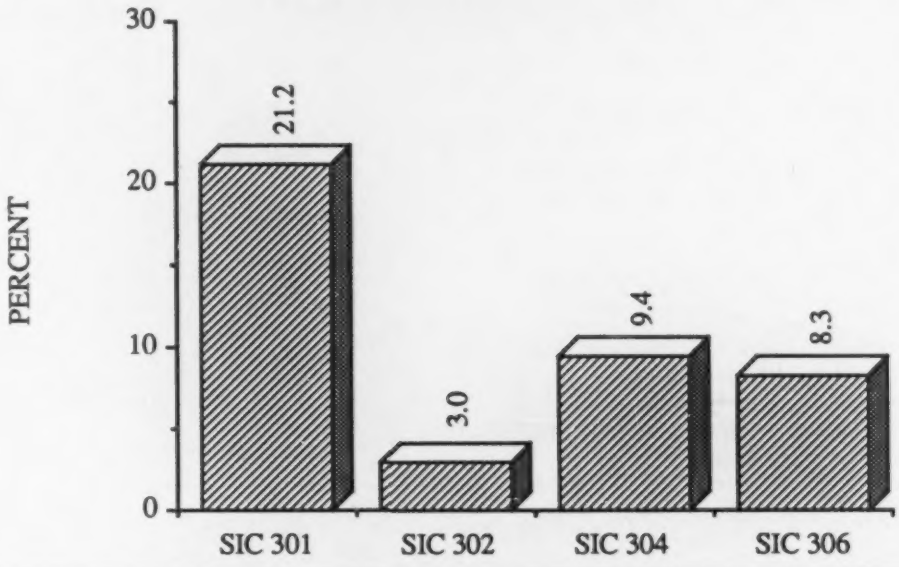


FIGURE 19
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 31

Except 317

LEATHER AND LEATHER PRODUCTS
April 1986

This major group includes establishments engaged in tanning, currying, and finishing hides and skins, and establishments manufacturing finished leather and artificial leather products and some similar products made of other materials. Leather converters are also included.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	3,010	NA	100.0
Managers and Officers	100	NA	3.3
General Managers and Top Executives	60	9.1	2.0
Other Managers and Administrators	40	NA	1.3
Professional and Technical Workers	50	NA	1.7
Sales Workers	150	NA	5.0
Sales Representatives, Nonscientific - except Retail	120	8.3	3.9
Other Sales and Related Workers	30	NA	1.0
Clerical Workers	310	NA	10.3
Clerical and Administrative Supervisors	20	11.4	0.7
Secretaries	50	4.8	1.6
Bookkeeping, Accounting, and Auditing Clerks	40	10.0	1.3
Billing, Cost, and Rate Clerks	20	6.9	0.7
General Office Clerks	20	15.6	0.7
Other Office Machine Operators	30	NA	1.0
Traffic, Shipping, and Receiving Clerks	40	17.2	1.3
Other Clerical and Administrative Workers	90	NA	3.0
Service Workers	30	NA	1.0
Production and Maintenance Workers	2,370	NA	78.7
Production Supervisors	100	2.4	3.3
Production Inspectors	30	12.8	1.0
Maintenance Mechanics, Sewing Machine	20	4.6	0.7
Other Machinery Maintenance Mechanics	20	NA	0.7
Other Mechanics, Installers, and Repairers	20	NA	0.7
Shoe and Leather Workers and Repairers	80	17.2	2.7
Other Precision Workers	20	NA	0.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Metal and Plastic Machine Operators and Tenders	20	NA	0.7
Sewing Machine Operators, Garment	480	16.7	16.0
Cutting and Slicing Machine Operators and Tenders	110	6.2	3.7
Cementing and Gluing Machine Operators and Tenders	70	8.5	2.3
Other Machine Setters and Set-up Operators	30	NA	1.0
Other Machine Operators and Tenders	520	NA	17.6
Hand Cutters and Trimmers	80	12.7	2.7
Assemblers and Fabricators- except Machine, Electrical, Electronic, and Precision	340	8.8	11.3
Other Hand Workers	90	NA	2.9
Material Movers, Hand	50	7.4	1.6
Hand Packers and Packagers	30	14.7	1.1
Other Laborers	260	NA	8.6

1/ Details may not add to total due to rounding or data suppression.

TABLE 9

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Sewing Machine Operators, Garment	480	16.0
Assemblers and Fabricators - except Machine, Electrical, Electronic and Precision	340	11.3
Sales Representatives, Nonscientific - except Retail	120	3.9
Cutting and Slicing Machine Operators and Tenders	110	3.7
Production Supervisors	100	3.3

FIGURE 20
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

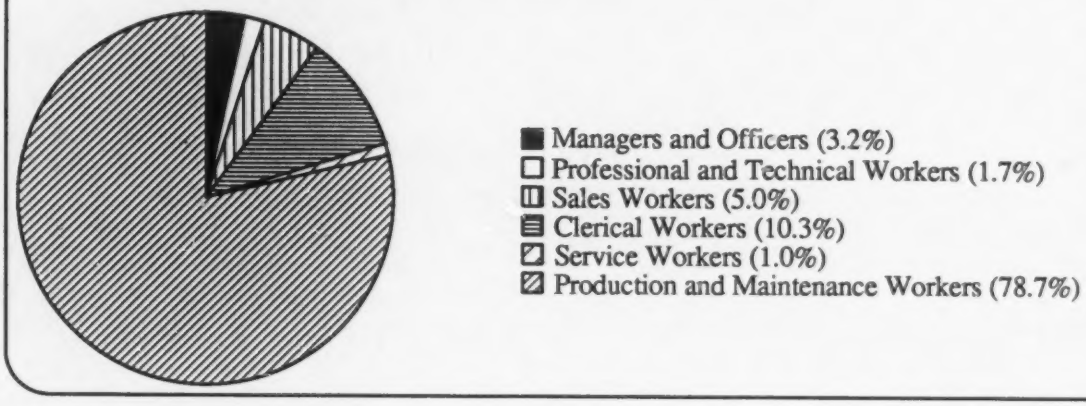
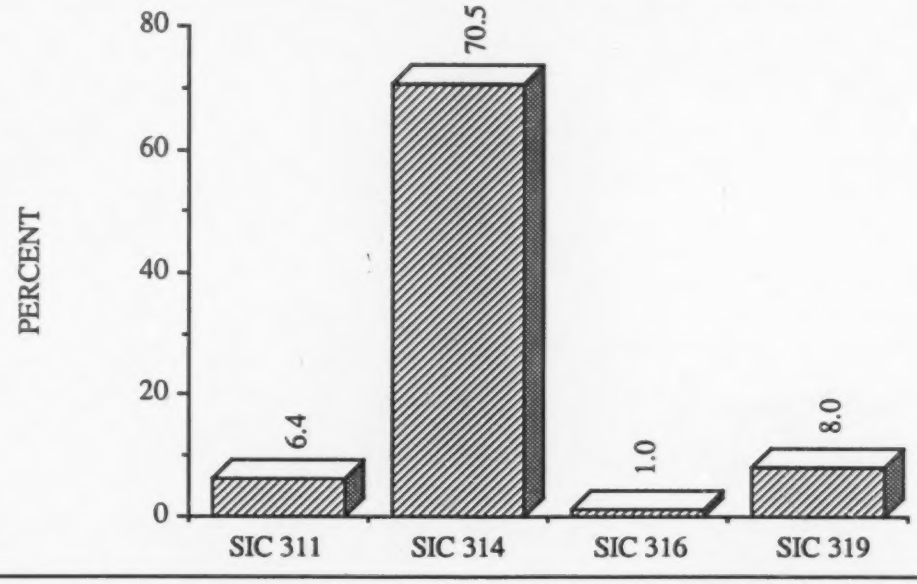


FIGURE 21
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 32

Except 322

STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
May 1986

Establishments in this group are primarily engaged in manufacturing flat glass and other glass products, cement, brick, structural clay tile, pottery, vitreous china, concrete, gypsum, and plaster products. It also includes the manufacture of cut stone, stone products, and asbestos.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	14,950	NA	100.0
Managers and Officers	940	NA	6.3
Financial Managers	60	12.7	0.4
Personnel and Labor Relations Managers	40	10.1	0.3
Purchasing Managers	20	16.5	0.1
Marketing, Advertising, and Public Relations Managers	50	26.8	0.3
Engineering, Math, and Natural Science Managers	40	18.0	0.3
Industrial Production Managers	230	7.3	1.5
General Managers and Top Executives	380	7.5	2.5
Other Managers and Administrators	120	NA	0.8
Professional and Technical Workers	530	NA	3.5
Accountants and Auditors	70	32.8	0.4
Other Financial Specialists	30	NA	0.2
Purchasing Agents and Buyers, except Farm Products	40	19.3	0.3
Personnel and Labor Relations Specialists	30	30.8	0.2
Other Management Support Workers	40	NA	0.3
Metallurgists and Metallurgical, Ceramic, and Materials Engineers	20	35.0	0.1
Industrial Engineers	30	18.2	0.2
Mechanical Engineers	30	17.0	0.2
Other Engineers	30	NA	0.2
Drafters	40	19.3	0.3
Other Engineering Technicians and Technologists	40	NA	0.3
Other Science Technicians and Technologists	40	NA	0.3
Computer Programmers	20	32.3	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Professional and Technical Workers	70	NA	0.4
Sales Workers	470	NA	3.1
Sales Supervisors	40	19.6	0.3
Sales Representatives, Scientific - except Retail	70	15.2	0.4
Sales Representatives, Nonscientific - except Retail	300	13.5	2.0
Other Sales and Related Workers	60	NA	0.4
Clerical Workers	1,360	NA	9.1
Clerical and Administrative Supervisors	50	9.7	0.3
Adjustment Clerks	40	22.2	0.2
Secretaries	280	9.9	1.9
Receptionists and Information Clerks	20	14.6	0.2
Personnel Clerks	20	16.0	0.1
Bookkeeping, Accounting, and Auditing Clerks	240	7.5	1.6
Payroll and Timekeeping Clerks	40	10.1	0.2
Billing, Cost, and Rate Clerks	30	17.8	0.2
General Office Clerks	120	12.7	0.8
Computer Operators	20	23.0	0.1
Data Entry Keyers	20	14.5	0.1
Switchboard Operators	30	10.2	0.2
Dispatchers -except Police, Fire, and Ambulance	150	9.4	1.0
Production, Planning, and Expediting Clerks	60	10.6	0.4
Stock Clerks - Stockroom or Warehouse	70	9.8	0.5
Traffic, Shipping, and Receiving Clerks	100	9.9	0.7
Other Material Recording and Related Workers	30	NA	0.3
Other Clerical and Administrative Workers	40	NA	0.3
Service Workers	130	NA	0.9
Guards and Watch Guards	30	21.3	0.2
Janitors and Cleaners	80	10.9	0.5
Other Cleaning and Building Service Workers	20	NA	0.1
Production and Maintenance Workers	11,530	NA	77.1
Mechanic and Repairer Supervisors	60	8.7	0.4
Production Supervisors	520	6.3	3.5
Transportation and Material Moving Supervisors	20	21.4	0.1
Laborer Supervisors	20	34.8	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Precision Inspectors, Testers, and Graders	30	17.0	0.2
Production Inspectors	270	7.6	1.8
Machinery Maintenance Mechanics	290	8.2	2.0
Maintenance Repairers, General Utility	170	12.6	1.1
Automotive Mechanics	50	21.0	0.3
Bus, Truck, and Diesel Mechanics	180	12.3	1.2
Other Mechanics, Installers, and Repairers	100	NA	0.7
Carpenters	40	25.4	0.3
Electricians	60	6.2	0.4
Concrete and Terrazzo Finishers	80	34.0	0.5
Other Construction and Extractive Workers	170	NA	1.2
Tool and Die Makers	20	6.1	0.1
Machinists	40	22.6	0.3
Other Precision Metal Workers	20	NA	0.1
Precision Molders, Shapers, Casters, and Carvers, except Jewelry and Foundry	420	20.3	2.8
Precision Patternmakers, Model Makers, Layout Workers, and Cutters	20	28.5	0.2
Other Precision Workers	20	NA	0.1
Metal and Plastic Machine Forming Operators and Tenders	70	17.8	0.5
Other Metal and Plastic Machine Setters and Set-up Operators	170	NA	1.2
Other Metal and Plastic Machine Operators and Tenders	240	NA	1.6
Furnance, Kiln, and Oven Operators and Tenders	300	8.0	2.0
Cutting and Slicing Machine Setters and Set-up Operators	140	13.7	0.9
Cutting and Slicing Machine Operators and Tenders	370	8.5	2.5
Painting and Related Machine Operators and Tenders	60	18.1	0.4
Cleaning, Washing, and Pickling Equipment Operators and Tenders	80	23.9	0.5
Crushing, Grinding, and Mixing Machine Operators and Tenders	460	11.0	3.0
Extruding, Forming, and Pressing Machine Setters and Set-up Operators	370	16.6	2.5
Extruding, Forming, and Pressing Machine Operators and Tenders	220	12.0	1.4
Packaging and Filling Machine Operators and Tenders	140	11.0	0.9
Other Machine Setters and Set-up Operators	100	NA	0.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Machine Operators and Tenders	240	NA	1.7
Welders and Cutters	60	17.5	0.4
Cutters and Trimmers, Hand	100	16.2	0.7
Molders and Casters, Hand	320	21.7	2.1
Grinding and Polishing Workers, Hand	330	30.4	2.2
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	260	12.6	1.7
Other Hand Workers	60	NA	0.4
Plant and System Operators	60	25.1	0.4
Truck Drivers, Heavy - inc. Tractor-Trailer	1,620	9.2	10.8
Truck Drivers, Light - inc. Delivery and Route Workers	240	25.7	1.6
Other Transportation and Related Workers	230	NA	1.5
Grader, Dozer, and Scraper Operators	40	19.4	0.3
Hoist and Winch Operators	40	32.5	0.3
Crane and Tower Operators	40	27.4	0.3
Industrial Truck and Tractor Operators	380	6.7	2.6
Conveyor Operators and Tenders	40	20.5	0.3
Other Material Moving Equipment Operators	50	NA	0.3
Machine Feeders and Offbearers	560	10.0	3.8
Materials Movers, Hand	490	13.6	3.2
Hand Packers and Packagers	300	9.6	2.0
Other Laborers	750	NA	5.0

1/ Details may not add to total due to rounding or data suppression.

TABLE 10

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Truck Drivers, Heavy-inc. Tractor Trailer	1,620	10.8
Machine Feeders and Offbearers	560	3.8
Production Supervisors	520	3.5
Material Movers, Hand	490	3.2
Crushing, Grinding, and Mixing Machine Operators and Tenders	460	3.0

FIGURE 22
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

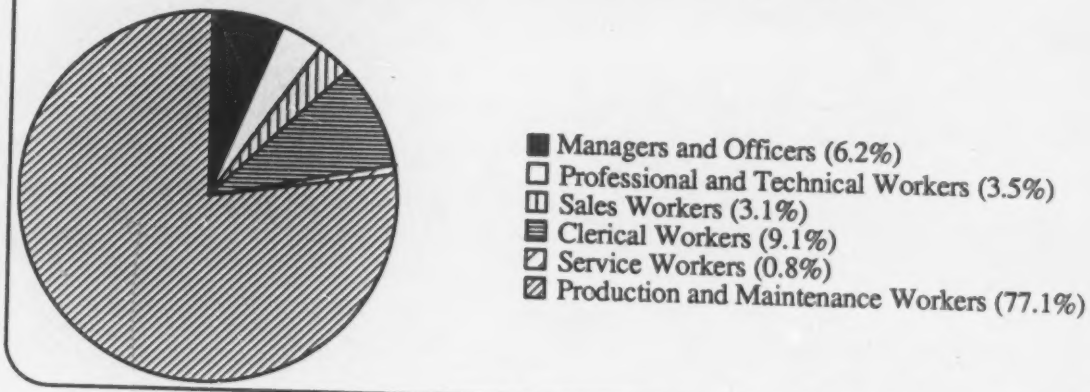
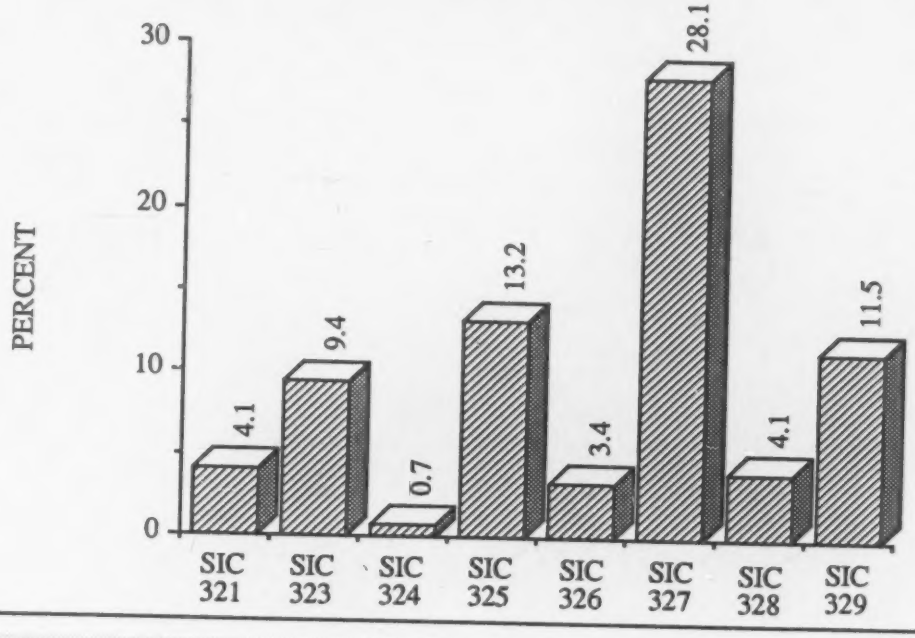


FIGURE 23
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 33

PRIMARY METALS INDUSTRIES
April 1986

This major group includes establishments primarily engaged in manufacturing pig iron, hot metal, and ferroalloys; iron and steel castings; and rolling, drawing, and extruding copper, brass, and bronze. It also includes the manufacture of castings and die castings of aluminum, brass, bronze, etc., and the secondary smelting of nonferrous metals.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	10,720	NA	100.0
Managers and Officers	620	NA	5.7
Financial Managers	40	7.4	0.3
Personnel and Labor Relations Managers	40	4.9	0.3
Purchasing Managers	20	9.3	0.3
Marketing, Advertising, and Public Relations Managers	70	5.3	0.7
Engineering, Math, and Natural Science Managers	60	4.7	0.6
Industrial Production Managers	100	6.9	0.9
General Managers and Top Executives	220	4.4	2.0
Other Managers and Administrators	70	NA	0.6
Professional and Technical Workers	790	NA	7.3
Accountants and Auditors	40	9.4	0.3
Other Financial Specialists	20	NA	0.2
Purchasing Agents and Buyers, except Farm Products	40	9.2	0.3
Personnel and Labor Relations Specialists	30	10.2	0.3
Other Management Support Workers	30	NA	0.2
Metallurgists and Metallurgical, Ceramic and Material Engineers	20	11.0	0.2
Electrical and Electronic Engineers	90	11.0	0.8
Industrial Engineers	20	10.9	0.2
Mechanical Engineers	100	9.1	1.0
Other Engineers	50	NA	0.5
Electrical and Electronic Engineering Technicians and Technologists	130	5.4	1.2
Drafters	20	10.8	0.2
Other Engineering Technicians and Technologists	50	NA	0.5
Chemical Technicians and Technologists, except Health	40	19.7	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
EDP Systems Analysts	40	3.6	0.4
Computer Programmers	20	11.1	0.2
Other Professional and Technical Workers	50	NA	0.5
Sales Workers	200	NA	1.8
Sales Supervisors	30	28.7	0.3
Sales Engineers	20	20.9	0.2
Sales Representatives, Scientific - except Retail	50	5.7	0.4
Sales Representatives, Nonscientific - except Retail	70	18.0	0.6
Other Sales and Related Workers	30	NA	0.3
Clerical Workers	980	NA	9.1
Clerical and Administrative Supervisors	70	8.7	0.6
Secretaries	200	3.8	1.9
Bookkeeping, Accounting, and Auditing Clerks	100	6.2	1.0
Payroll and Timekeeping Clerks	20	10.4	0.2
Billing, Cost, and Rate Clerks	20	11.0	0.1
General Office Clerks	60	7.8	0.6
Computer Operators	20	9.1	0.2
Data Entry Keyers	20	8.2	0.2
Switchboard Operators	20	12.6	0.1
Production, Planning, and Expediting Clerks	70	9.0	0.6
Weighers, Measurers, Checkers, and Samplers	20	13.3	0.2
Stock Clerks - Stockroom or Warehouse	60	9.0	0.6
Traffic, Shipping, and Receiving Clerks	150	10.5	1.4
Other Clerical and Administrative Workers	150	NA	1.4
Service Workers	160	NA	1.4
Janitors and Cleaners	100	6.4	0.9
Other Service Workers	60	NA	0.5
Production and Maintenance Workers	8,010	NA	74.7
Mechanic and Repairer Supervisors	60	16.6	0.6
Production Supervisors	400	6.7	3.8
Transportation and Material Moving Supervisors	20	21.5	0.1
Precision Inspectors, Testers, and Graders	70	6.4	0.7
Production Inspectors	310	14.4	2.8
Machinery Maintenance Mechanics	220	11.2	2.0
Machinery Maintenance Workers	110	16.6	1.0
Maintenance Repairers, General Utility	280	14.2	2.6

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Mechanics, Installers, and Repairers	100	NA	1.0
Carpenters	20	14.8	0.2
Electricians	90	13.2	0.8
Other Construction and Extractive Workers	50	NA	0.5
Tool and Die Makers	40	11.3	0.4
Machinists	90	12.5	0.8
Precision Tool Grinders, Filers, and Sharpeners	70	32.8	0.7
Pattern and Model Makers, Wood	20	20.0	0.1
Precision Foundry Mold and Core Makers	110	16.9	1.1
Drilling and Boring Machine Tool Setters and Set-up Operators, Metal and Plastic	50	21.8	0.5
Grinding, Lapping, and Buffing Machine Tool Setters and Set-up Operators	40	33.4	0.3
Machine Tool Cutting Operators and Tenders, Metal and Plastic	60	25.8	0.6
Extruding and Drawing Machine Setters and Set-up Operators, Metal and Plastic	380	23.1	3.6
Machine Forming Operators and Tenders, Metal and Plastic	1,190	19.0	11.1
Metal Molding, Coremaking, and Casting Machine Setters and Set-up Operators	50	11.8	0.5
Metal Molding, Coremaking, and Casting Machine Operators and Tenders	160	13.3	1.5
Foundry Mold Assembly and Shakeout Workers	60	27.4	0.6
Heating Equipment Setters and Set-up Operators, Metal and Plastic	60	17.8	0.5
Heat Treating, Annealing, and Tempering Machine Operators and Tenders, Metal and Plastic	120	27.5	1.1
Furnace Operators and Tenders	330	16.8	3.0
Other Metal and Plastic Machine Setters and Set-up Operators	200	NA	1.9
Other Metal and Plastic Machine Operators and Tenders	410	NA	3.9
Crushing, Grinding, and Mixing Machine Operators and Tenders	140	24.2	1.3
Packaging and Filling Machine Operators and Tenders	100	30.0	0.9
Other Machine Setters and Set-up Operators	290	NA	2.8
Other Machine Operators and Tenders	280	NA	2.7
Metal Pourers and Casters	140	16.4	1.3
Grinding and Polishing Workers, Hand	90	18.1	0.8

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	50	11.2	0.5
Other Hand Workers	20	NA	0.1
Truck Drivers, Heavy - inc. Tractor-Trailer	110	20.9	1.1
Truck Drivers, Light - inc. Delivery and Route Workers	20	18.4	0.1
Other Transportation and Related Workers	50	NA	0.5
Crane and Tower Operators	120	17.4	1.1
Industrial Truck and Tractor Operators	160	9.5	1.5
Other Material Moving Equipment Operators	40	NA	0.3
Machanic and Repairer Helpers	50	16.2	0.4
Material Movers, Hand	190	12.1	1.8
Hand Packers and Packagers	160	24.1	1.5
Other Laborers	830	NA	7.7

1/ Details may not add to total due to rounding or data suppression.

TABLE 11

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Machine Forming Operators and Tenders, Metal and Plastic	1,190	11.1
Production Supervisors	400	3.8
Extruding and Drawing Machine Setters and Set-up Operators, Metal and Plastic	380	3.6
Furnace Operators and Tenders	330	3.0
Production Inspectors	310	2.8

FIGURE 24

PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

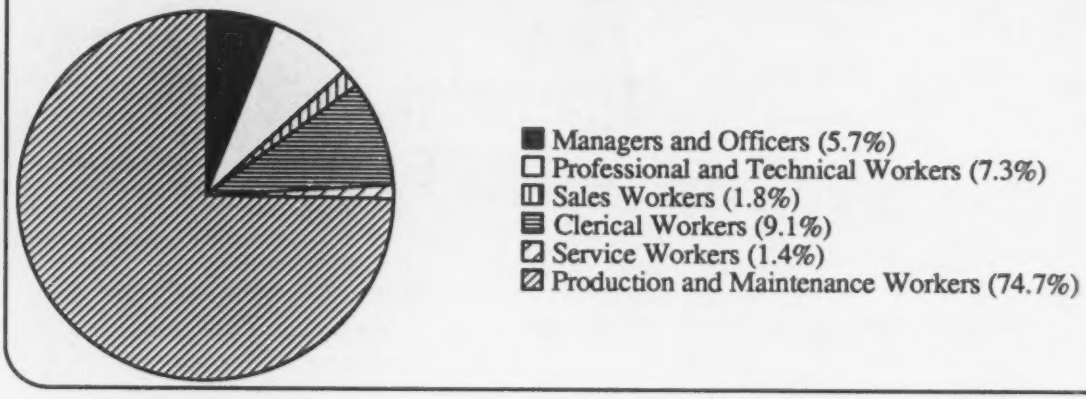
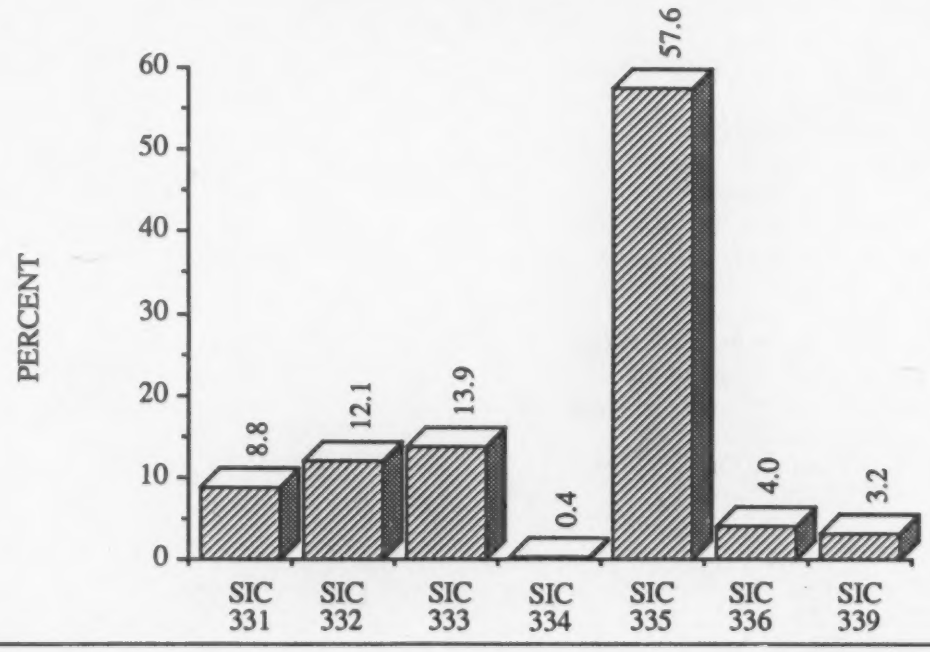


FIGURE 25

ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 34

Except 345

FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND TRANSPORTATION EQUIPMENT
June 1986

This group includes establishments engaged primarily in fabricating ferrous and nonferrous products such as cans, tinware, tools, cutlery, hardware, fabricated structural metal products, metal forgings, stampings, and a variety of metal and wire products not elsewhere classified.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	24,360	NA	100.0
Managers and Officers	1,290	NA	5.3
Financial Managers	140	10.9	0.6
Personnel and Labor Relations Managers	60	12.4	0.2
Purchasing Managers	60	15.1	0.2
Marketing, Advertising, and Public Relations Managers	80	27.1	0.3
Industrial Production Managers	310	8.3	1.3
General Managers and Top Executives	470	7.0	1.9
Other Managers and Administrators	170	NA	0.7
Professional and Technical Workers	1,240	NA	5.1
Accountants and Auditors	90	14.8	0.4
Purchasing Agents and Buyers, except Farm Products	150	12.6	0.6
Personnel and Labor Relations Specialists	40	17.7	0.2
Other Management Support Workers	50	NA	0.2
Cost Estimators	130	16.2	0.5
Civil Engineers	20	28.7	0.1
Industrial Engineers	80	20.1	0.3
Mechanical Engineers	120	19.6	0.5
Other Engineers	60	NA	0.2
Electrical and Electronic Engineering Technicians and Technologists	20	25.4	0.1
Industrial Engineering Technicians and Technologists	40	14.7	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Drafters	280	19.4	1.1
Other Engineering Technicians and Technologists	30	NA	0.1
EDP Systems Analysts	40	18.8	0.2
Computer Programmers	40	18.9	0.2
Other Professional and Technical Workers	50	NA	0.2
Sales Workers	560	NA	2.3
Sales Supervisors	80	32.0	0.3
Sales Representatives, Scientific - except Retail	60	30.9	0.2
Sales Representatives, Nonscientific - except Retail	340	18.2	1.4
Other Sales and Related Workers	80	NA	0.3
Clerical Workers	2,430	NA	10.0
Clerical and Administrative Supervisors	50	15.8	0.2
Adjustment Clerks	80	17.1	0.3
Secretaries	370	8.2	1.5
Receptionists and Information Clerks	30	14.7	0.1
Typists	30	34.9	0.1
Personnel Clerks	40	10.0	0.2
File Clerks	20	22.8	0.1
Order Clerks	50	28.9	0.2
Procurement Clerks	30	20.5	0.1
Bookkeeping, Accounting, and Auditing Clerks	320	9.8	1.3
Payroll and Timekeeping Clerks	70	10.2	0.3
Billing, Cost, and Rate Clerks	20	14.8	0.1
General Office Clerks	230	11.4	1.0
Computer Operators	70	12.1	0.3
Data Entry Keyers	80	14.8	0.3
Switchboard Operators	50	14.4	0.2
Production, Planning, and Expediting Clerks	230	11.4	0.9
Stock Clerks - Stockroom or Warehouse	200	8.5	0.8
Traffic, Shipping, and Receiving Clerks	370	15.0	1.5
Other Clerical and Administrative Workers	90	NA	0.4
Service Workers	270	NA	1.1
Guards and Watch Guards	60	18.0	0.2
Janitors and Cleaners	170	10.8	0.7
Other Service Workers	40	NA	0.2
Production and Maintenance Workers	18,570	NA	76.2
Mechanic and Repair Supervisors	60	19.8	0.2
Production Supervisors	920	10.3	3.8
Transportations Supervisors	40	13.5	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Supervisors	60	NA	0.2
Precision Inspectors, Testers, and Graders	90	22.1	0.4
Machinery Maintenance Mechanics	360	9.5	1.5
Machinery Maintenance Workers	90	9.0	0.4
Maintenance Repairers, General Utility	280	9.9	1.1
Other Mechanics and Repairers	790	NA	3.2
Electricians	90	16.1	0.4
Painters and Paperhangers	70	10.8	0.3
Other Construction and Extractive Workers	180	NA	0.7
Tool and Die Makers	400	14.9	1.6
Machinists	580	18.5	2.4
Tool Grinders, Filers, and Sharpeners	180	28.0	0.7
Pattern and Model Makers, Metal	30	27.9	0.1
Precision Layout Workers, Metal	160	26.1	0.7
Sheet Metal Workers	630	22.2	2.6
Other Precisions Metal Workers	70	NA	0.3
Sawing Machine Setters and Set-up Operators, Metal and Plastic	70	25.3	0.3
Lathe and Turning Machine Setters and Set-up Operators, Metal and Plastic	400	22.0	1.6
Drilling and Boring Machine Setters and Set-up Operators, Metal and Plastic	100	16.8	0.4
Milling and Planing Machine Setters and Set-up Operators, Metal and Plastic	60	29.2	0.2
Grinding, Lapping, and Buffing Machine Setters and Set-up Operators, Metal and Plastic	320	22.2	1.3
Machine Cutting Operators and Tenders, Metal and Plastic	560	28.5	2.3
Punching Machine Setters and Set-up Operators, Metal and Plastic	270	31.5	1.1
Press and Press Brake Machine Setters and Set-up Operators, Metal and Plastic	420	15.5	1.7
Shear and Slitter Machine Setters and Set-up Operators, Metal and Plastic	150	26.0	0.6
Rolling Machine Setters and Set-up Operators, Metal and Plastic	80	34.4	0.3
Machine Forming Operators and Tenders, Metal and Plastic	1,180	16.5	4.8
Combination Machine Setters and Set-up Operators, Metal and Plastic	90	25.5	0.4
Welding Machine Operators and Tenders	200	34.9	0.8
Metal Fabricators, Structural Metal Products	1,140	18.4	4.7
Electrolytic Plating and Coating Machine Setters and Set-up Operators, Metal and Plastic	120	24.7	0.5

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Electrolytic Plating and Coating Machine Operators and Tenders, Metal and Plastic	330	13.3	1.4
Nonelectrolytic Plating and Coating Machine Setters and Set-up Operators, Metal and Plastic	100	14.8	0.4
Heat Treating, Annealing, and Tempering Machine Operators and Tenders, Metal and Plastic	90	29.4	0.4
Other Metal and Plastic Machine Setters and Set-up Operators	410	NA	1.7
Other Metal and Plastic Machine Operators and Tenders	500	NA	2.0
Printing Press Machine Operators and Tenders	20	14.8	0.1
Painting and Related Machine Setters and Set-up Operators	110	30.5	0.4
Painting and Related Machine Operators and Tenders	300	23.5	1.2
Crushing, Grinding, Mixing, and Blending Machine Operators and Tenders	60	29.2	0.2
Packaging and Filling Machine Operators and Tenders	150	13.3	0.6
Other Machine Setters and Set-up Operators	120	NA	0.5
Other Machine Operators and Tenders	110	NA	0.4
Fitters, Structural Metal - Precision	170	33.4	0.7
Other Precision Metal Assemblers	120	NA	0.5
Welders and Cutters	590	23.0	2.4
Grinding and Polishing Workers, Hand	200	24.7	0.8
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	2,440	15.7	10.0
Other Hand Workers	270	NA	1.1
Plant and System Operators	20	25.1	0.1
Truck Drivers, Heavy - inc. Tractor-Trailer	280	13.5	1.2
Truck Drivers, Light - inc. Delivery and Route Workers	100	21.9	0.4
Crane and Tower Operators	60	30.7	0.2
Industrial Truck and Tractor Operators	320	18.3	1.3
Other Material Moving Equipment Operators	50	NA	0.2
Construction Trades Worker Helpers	50	27.6	0.2
Machine Feeders and Offbearers	260	31.9	1.1
Material Movers, Hand	510	11.2	2.1
Hand Packers and Packages	380	23.9	1.6
Other Laborers	260	NA	1.1

1/ Details may not add to total due to rounding or data suppression.

TABLE 12
THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic and Precision	2,440	10.0
Machine Forming Operators and Tenders, Metal and Plastic	1,180	4.8
Metal Fabricators, Structural Metal Products	1,140	4.7
Production Supervisors	920	3.8
Sheet Metal Workers	630	2.6

FIGURE 26
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

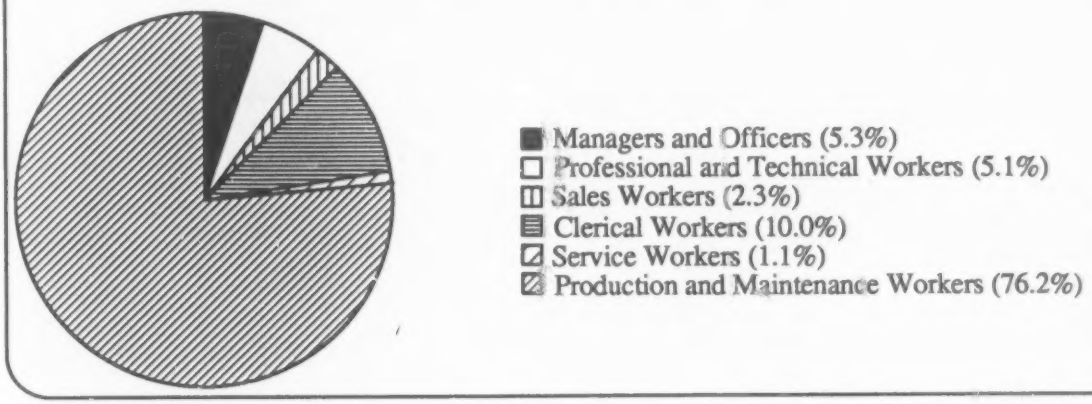
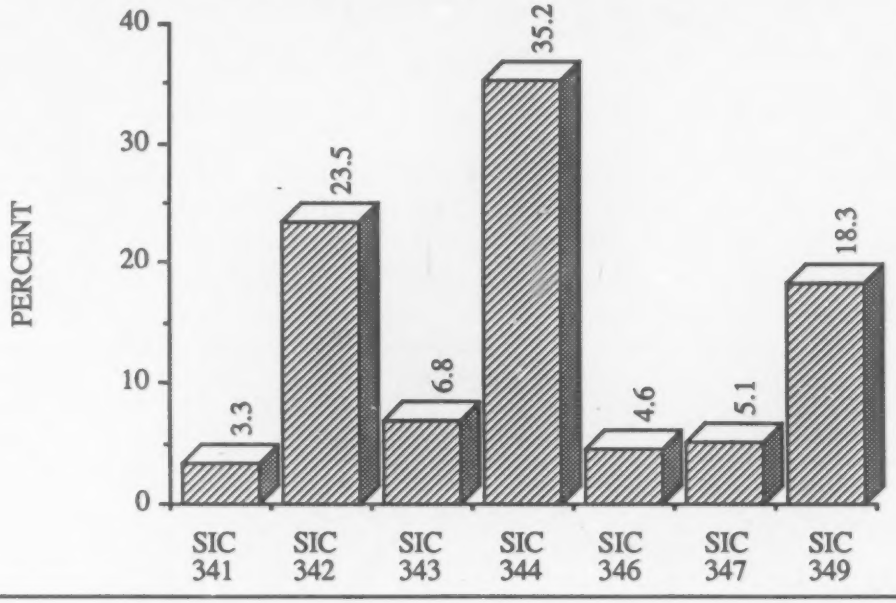


FIGURE 27
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 35

MACHINERY, EXCEPT ELECTRICAL
June 1986

Establishments in this major group are primarily engaged in manufacturing machinery and equipment, other than electrical equipment and transportation equipment. It includes machinery with built-in or detachable motors and portable tools, both electric and pneumatic-powered. It does not include electrical household appliances or hand tools.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	55,650	NA	100.0
Managers and Officers	4,290	NA	7.7
Financial Managers	310	7.3	0.6
Personnel and Labor Relations Managers	160	4.5	0.3
Purchasing Managers	150	4.4	0.3
Marketing, Advertising, and Public Relations Managers	120	8.7	0.2
Administrative Services Managers	50	14.8	0.1
Engineering, Math, and Natural Science Managers	280	9.1	0.5
Industrial Production Managers	410	5.9	0.7
General Managers and Top Executives	860	6.1	1.5
Other Managers and Administrators	1,950	NA	3.5
Professional and Technical Workers	10,440	NA	18.8
Accountants and Auditors	180	13.0	0.3
Budget Analysts	40	9.1	0.1
Other Financial Specialists	40	NA	0.1
Purchasing Agents and Buyers, except Farm Products	450	4.6	0.8
Personnel and Labor Relations Specialists	170	4.1	0.3
Cost Estimators	130	10.1	0.2
Other Management Support Workers	1,500	NA	2.7
Chemical Engineers	60	15.1	0.1
Electrical and Electronic Engineers	1,760	2.8	3.2
Industrial Engineers	1,160	2.4	2.1
Mechanical Engineers	640	9.3	1.1
Other Engineers	150	NA	0.3
Electrical and Electronic Engineering Technicians and Technologists	530	8.8	1.0

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Industrial Engineering Technicians and Technologists	80	15.8	0.1
Mechanical Engineering Technicians and Technologists	160	24.3	0.3
Drafters	530	6.4	1.0
Other Engineering Technicians and Technologists	120	NA	0.2
EDP Systems Analysts	320	3.9	0.6
Computer Programmers	1,830	2.8	3.3
Programmers - Numerical, Tool, and Process Control	70	24.4	0.1
Technical Writers	30	21.6	0.1
Designers	250	9.3	0.4
Other Professional and Technical Workers	240	NA	0.4
Sales Workers	960	NA	1.7
Sales Supervisors	80	13.6	0.1
Sales Engineers	140	14.1	0.2
Sales Representatives, Scientific - except Retail	200	23.2	0.4
Sales Representatives, Nonscientific - except Retail	420	16.4	0.8
Other Sales and Related Workers	120	NA	0.2
Clerical Workers	8,570	NA	15.4
Clerical and Administrative Supervisors	240	10.7	0.4
Adjustment Clerks	80	22.2	0.1
Secretaries	1,180	3.8	2.1
Receptionists and Information Clerks	70	9.4	0.1
Typists	70	11.5	0.1
Typists, Word Processing	30	17.6	0.1
Personnel Clerks	60	8.5	0.1
Order Clerks	210	10.0	0.4
Procurement Clerks	90	7.0	0.2
Statistical Clerks	40	12.6	0.1
Bookkeeping, Accounting, and Auditing Clerks	560	7.3	1.0
Payroll and Timekeeping Clerks	100	6.4	0.2
Billing, Cost, and Rate Clerks	70	10.6	0.1
General Office Clerks	2,020	3.4	3.6
Computer Operators	400	3.7	0.7
Data Entry Keyers	190	8.3	0.3
Other Office Machine Operators	40	NA	0.1
Switchboard Operators	60	7.5	0.1
Production, Planning, and Expediting Clerks	990	3.9	1.8
Stock Clerks - Stockroom or Warehouse	960	4.0	1.7
Traffic, Shipping, and Receiving Clerks	540	6.9	1.0

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Clerical and Administrative Workers	570	NA	1.0
Service Workers	370	NA	0.7
Guards and Watch Guards	50	20.6	0.1
Janitors and Cleaners	260	9.4	0.5
Other Service Workers	60	NA	0.1
Production and Maintenance Workers	31,020	NA	55.7
Mechanic and Repairer Supervisors	100	10.2	0.2
Production Supervisors	1,230	4.2	2.2
Other Supervisors	140	NA	0.2
Precision Inspectors, Testers, and Graders	890	7.3	1.6
Production Inspectors	1,220	20.2	2.2
Machinery Maintenance Mechanics	430	11.8	0.8
Millwrights	60	26.4	0.1
Maintenance Repairers, General Utility	480	10.4	0.9
Data Processing Equipment Repairers	160	10.3	0.3
Precision Instrument Repairers	80	20.9	0.1
Other Mechanics and Repairers	160	NA	0.3
Electricians	120	17.2	0.2
Painters and Paperhangers	140	12.5	0.2
Other Construction and Extractive Workers	60	NA	0.1
Tool and Die Makers	650	20.4	1.2
Machinists	3,140	8.8	5.6
Precision Tool Grinders, Filers, and Sharpeners	200	13.6	0.4
Precision Layout Workers	50	25.0	0.1
Sheet Metal Workers	660	14.6	1.2
Other Precision Metal Workers	100	NA	0.2
Pattern and Model Makers, Wood	40	32.5	0.1
Precision Foundry Mold and Core Makers	70	32.5	0.1
Other Precision Workers	80	NA	0.1
Sawing Machine Setters and Set-up Operators, Metal and Plastic	80	15.7	0.1
Lathe and Turning Machine Setters and Set-up Operators, Metal and Plastic	840	11.4	1.5
Drilling and Boring Machine Setters and Set-up Operators, Metal and Plastic	400	13.4	0.7
Milling and Planing Machine Setters and Set-up Operators, Metal and Plastic	260	22.3	0.5
Grinding, Lapping, and Buffing Machine Setters and Set-up Operators, Metal and Plastic	360	17.6	0.6
Machine Tool Cutting Operators and Tenders, Metal and Plastic	850	16.2	1.5
Punching Machine Setters and Set-up Operators, Metal and Plastic	90	13.2	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Press and Press Brake Machine Setters and Set-up Operators, Metal and Plastic	170	13.5	0.3
Shear and Slitter Machine Setters and Set-up Operators, Metal and Plastic	110	14.4	0.2
Machine Forming Operators and Tenders, Metal and Plastic	460	30.3	0.8
Numerical Control Machine Operators and Tenders, Metal and Plastic	850	20.9	1.5
Combination Machine Setters and Set-up Operators, Metal and Plastic	220	34.8	0.4
Welding Machine Setters and Set-up Operators	230	12.9	0.4
Welding Machine Operators and Tenders	420	19.5	0.8
Metal Molding, Coremaking, and Casting Machine Setters and Set-up Operators	70	22.0	0.1
Heating Equipment Setters and Set-up Operators, Metal and Plastic	30	29.9	0.1
Heat Treating, Annealing, and Tempering Machine Operators and Tenders, Metal and Plastic	100	25.4	0.2
Other Metal and Plastic Machine Setters and Set-up Operators	170	NA	0.3
Other Metal and Plastic Machine Operators and Tenders	770	NA	1.4
Painting and Related Machine Setters and Set-up Operators	70	16.0	0.1
Painting and Related Machine Operators and Tenders	150	20.6	0.3
Packaging and Filling Machine Operators and Tenders	50	16.0	0.1
Other Machine Setters and Set-up Operators	100	NA	0.2
Other Machine Operators and Tenders	300	NA	0.5
Precision Machine Assemblers	1,380	14.9	2.5
Precision Electromechanical Equipment Assemblers	1,610	3.8	2.9
Precision Electrical and Electronic Equipment Assemblers	690	14.5	1.2
Other Precision Metal Assemblers	190	NA	0.3
Machine Assemblers	810	17.3	1.4
Electrical and Electronic Assemblers	380	23.9	0.7
Welders and Cutters	900	15.5	1.6
Grinding and Polishing Workers, Hand	400	26.2	0.7
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	4,730	12.8	8.5
Other Hand Workers	460	NA	0.8

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Truck Drivers, Heavy - inc. Tractor-Trailer	80	17.5	0.1
Truck Drivers, Light - inc. Delivery and Route Workers	60	13.2	0.1
Industrial Truck and Tractor Operators	220	12.6	0.4
Other Material Moving Equipment Operators	100	NA	0.2
Mechanic and Repairer Helpers	170	19.1	0.3
Material Movers, Hand	510	9.8	0.9
Hand Packers and Packagers	480	19.6	0.9
Other Laborers	440	NA	0.8

1/ Details may not add to total due to rounding or data suppression.

TABLE 13

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic and Precision	4,730	8.5
Machinists	3,140	5.6
General Office Clerks	2,020	3.6
Computer Programmers	1,830	3.3
Electrical and Electronic Engineers	1,760	3.2

FIGURE 28
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATIONAL CATEGORY

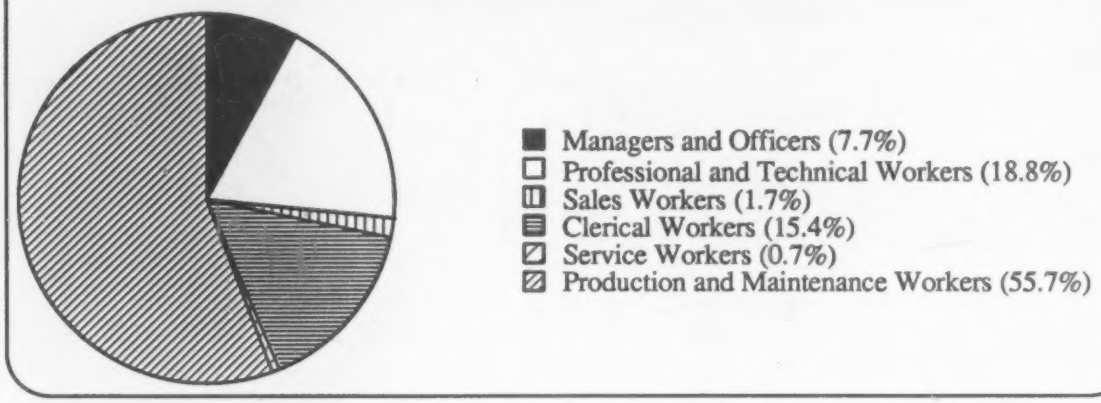
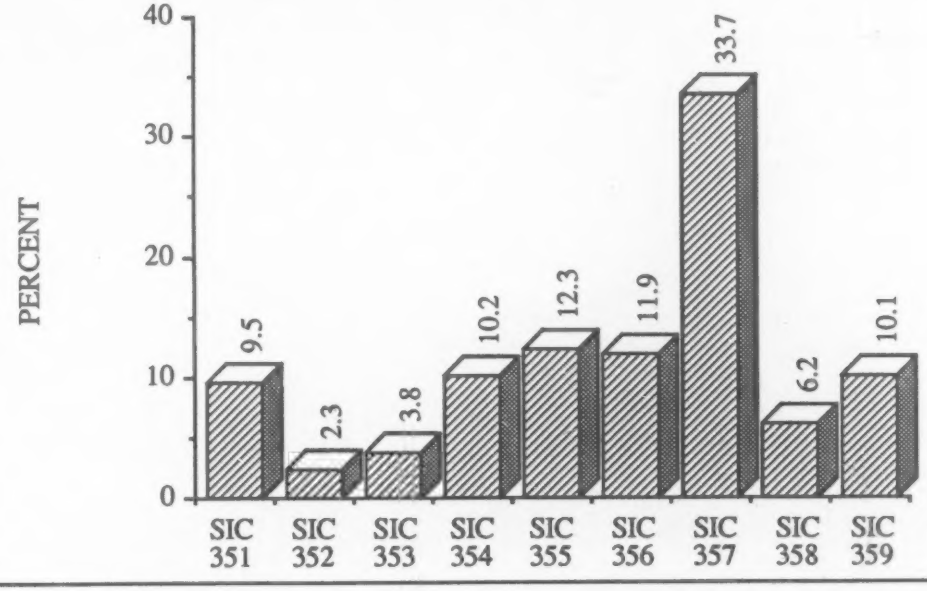


FIGURE 29
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 36

Except 366

ELECTRICAL AND ELECTRONIC MACHINERY, EQUIPMENT, AND SUPPLIES
June 1986

Establishments in this major group are primarily engaged in manufacturing machinery, apparatus, and supplies for the generation, storage, transmission, transformation, and utilization of electrical energy. This group includes the manufacture of household appliances.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	37,670	NA	100.0
Managers and Officers	1,540	NA	4.0
Financial Managers	150	8.2	0.4
Personnel and Labor Relations Managers	100	5.6	0.3
Purchasing Managers	60	5.4	0.2
Marketing, Advertising, and Public Relations Managers	120	11.9	0.3
Administrative Services Managers	30	14.3	0.1
Engineering, Math, and Natural Science Managers	230	6.1	0.6
Industrial Production Managers	350	9.2	0.9
General Managers and Top Executives	280	5.3	0.7
Other Managers and Administrators	220	NA	0.6
Professional and Technical Workers	2,920	NA	7.8
Accountants and Auditors	110	8.0	0.3
Budget Analysts	30	15.8	0.1
Other Financial Specialists	50	NA	0.1
Purchasing Agents and Buyers, except Farm Products	200	5.5	0.5
Personnel and Labor Relations Specialists	80	8.6	0.2
Cost Estimators	30	18.9	0.1
Other Management Support Workers	30	NA	0.1
Electrical and Electronic Engineers	480	9.0	1.3
Industrial Engineers	240	8.3	0.6
Mechanical Engineers	310	7.6	0.8
Other Engineers	140	NA	0.4

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Electrical and Electronic Engineering Technicians and Technologists	400	9.1	1.0
Industrial Engineering Technicians and Technologists	70	13.8	0.2
Mechanical Engineering Technicians and Technologists	80	26.6	0.2
Drafters	200	5.8	0.5
Other Engineering Technicians and Technologists	90	NA	0.2
Chemists	30	12.9	0.1
EDP Systems Analysts	120	16.1	0.3
Computer Programmers	80	9.4	0.2
Health Practitioners and Related Health Occupations	30	11.2	0.1
Other Professional and Technical Workers	120	NA	0.3
Sales Workers	500	NA	1.3
Sales Supervisors	80	13.4	0.2
Sales Engineers	90	13.4	0.2
Sales Representatives, Scientific - except Retail	120	14.9	0.3
Sales Representatives, Nonscientific - except Retail	120	13.5	0.3
Other Sales and Related Workers	90	NA	0.2
Clerical Workers	3,200	NA	8.5
Clerical and Administrative Supervisors	100	14.9	0.3
Adjustment Clerks	100	18.9	0.3
Secretaries	450	4.3	1.2
Receptionists and Information Clerks	60	9.5	0.2
Typists	110	19.4	0.3
Personnel Clerks	100	16.3	0.3
Order Clerks	100	14.9	0.3
Procurement Clerks	60	11.0	0.1
Statistical Clerks	40	12.6	0.1
Bookkeeping, Accounting, and Auditing Clerks	230	6.7	0.6
Payroll and Timekeeping Clerks	90	6.8	0.2
Billing, Cost, and Rate Clerks	50	16.2	0.1
General Office Clerks	220	8.2	0.6
Computer Operators	80	10.0	0.2
Data Entry Keyers	100	7.7	0.3
Switchboard Operators	50	9.6	0.1
Production, Planning, and Expediting Clerks	350	6.9	0.9
Weighers, Measurers, Checkers, and Samplers	40	20.2	0.1
Stock Clerks - Stockroom or Warehouse	420	12.0	1.1
Traffic, Shipping, and Receiving Clerks	290	9.1	0.8

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Material Recording and Related Workers	80	NA	0.2
Other Clerical and Administrative Workers	120	NA	0.3
Service Workers	290	NA	0.8
Service Supervisors	30	12.2	0.1
Guards and Watch Guards	50	18.3	0.1
Janitors and Cleaners	190	8.7	0.5
Other Service Workers	20	NA	0.1
Production and Maintenance Workers	29,190	NA	77.6
Mechanic and Repairer Supervisors	110	11.4	0.3
Production Supervisors	1,080	5.3	2.9
Laborer Supervisors	40	17.2	0.1
Other Supervisors	50	NA	0.1
Precision Inspectors, Testers, and Graders	490	7.7	1.3
Production Inspectors	1,180	10.4	3.1
Machinery Maintenance Mechanics	600	8.1	1.6
Millwrights	30	20.9	0.1
Machinery Maintenance Workers	100	33.0	0.3
Maintenance Repairers, General Utility	390	9.1	1.0
Electric Motor and Related Repairers	30	14.7	0.1
Electrical Repairers, Industrial Equipment	60	12.1	0.2
Other Mechanics and Repairers	80	NA	0.2
Electricians	110	16.4	0.3
Other Construction and Extractive Workers	30	NA	0.1
Tool and Die Makers	380	13.1	1.0
Machinists	260	12.1	0.7
Sheet Metal Workers	230	20.2	0.6
Other Precision Metal Workers	70	NA	0.2
Lathe and Turning Machine Setters and Set-up Operators, Metal and Plastic	160	18.1	0.4
Drilling and Boring Machine Setters and Set-up Operators, Metal and Plastic	60	19.3	0.2
Grinding and Buffing Machine Setters and Set-up Operators, Metal and Plastic	40	31.6	0.1
Machine Tool Cutting Operators and Tenders, Metal and Plastic	140	26.5	0.4
Punching Machine Setters and Set-up Operators, Metal and Plastic	130	18.9	0.4
Press and Press Brake Machine Setters and Set-up Operators, Metal and Plastic	80	16.3	0.2
Shear and Slitter Machine Setters and Set-up Operators, Metal and Plastic	40	18.7	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Machine Forming Operators and Tenders, Metal and Plastic	360	10.6	0.9
Numerical Control Machine Operators and Tenders, Metal and Plastic	60	25.0	0.2
Combination Machine Tools Operators and Tenders, Metal and Plastic	60	23.5	0.2
Welding Machine Setters and Set-up Operators	80	21.8	0.2
Welding Machine Operators and Tenders	130	8.6	0.3
Plastic Molding and Casting Machine Setters and Set-up Operators	190	11.8	0.5
Plastic Molding and Casting Machine Operators and Tenders	470	19.4	1.2
Metal Molding, Coremaking, and Casting Machine Setters and Set-up Operators	40	12.1	0.1
Other Machine Setters and Set-up Operators, Metal and Plastic	280	NA	0.7
Other Machine Operators and Tenders, Metal and Plastic	250	NA	0.7
Printing Press Machine Setters and Set-up Operators	50	31.2	0.1
Electronic Semiconductor Processors	110	0.0	0.3
Painting and Related Machine Setters and Set-up Operators	80	17.8	0.2
Painting and Related Machine Operators and Tenders	80	17.0	0.2
Packaging and Filling Machine Operators and Tenders	170	9.9	0.5
Other Machine Setters and Set-up Operators	150	NA	0.4
Other Machine Operators and Tenders	1,000	NA	2.7
Precision Electromechanical Equipment Assemblers	960	29.6	2.5
Precision Electrical and Electronic Equipment Assemblers	1,160	28.1	3.1
Other Precision Metal Assemblers	1,150	NA	3.1
Electrical and Electronic Assemblers	5,860	11.5	15.6
Coil Winders, Tapers, and Finishers	650	13.5	1.7
Welders and Cutters	100	9.9	0.3
Grinding and Polishing Workers, Hand	50	29.1	0.1
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	6,370	9.8	16.9
Other Hand Workers	1,080	NA	2.9
Truck Drivers, Heavy - inc. Tractor-Trailer	60	26.7	0.2
Truck Drivers, Light - inc. Delivery and Route Workers	80	13.3	0.2
Industrial Truck and Tractor Operators	300	13.6	0.8
Conveyor Operators and Tenders	70	4.8	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Material Moving Equipment Operators	60	NA	0.2
Machine Feeders and Offbearers	180	6.3	0.5
Material Movers, Hand	880	17.6	2.3
Other Laborers	650	NA	1.7

1/ Details may not add to total due rounding or data suppression.

TABLE 14

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic and Precision	6,370	16.9
Electrical and Electronic Assemblers	5,860	15.6
Production Inspectors	1,180	3.1
Precision Electrical and Electronic Equipment Assemblers	1,160	3.1
Production Supervisors	1,080	2.9

FIGURE 30

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

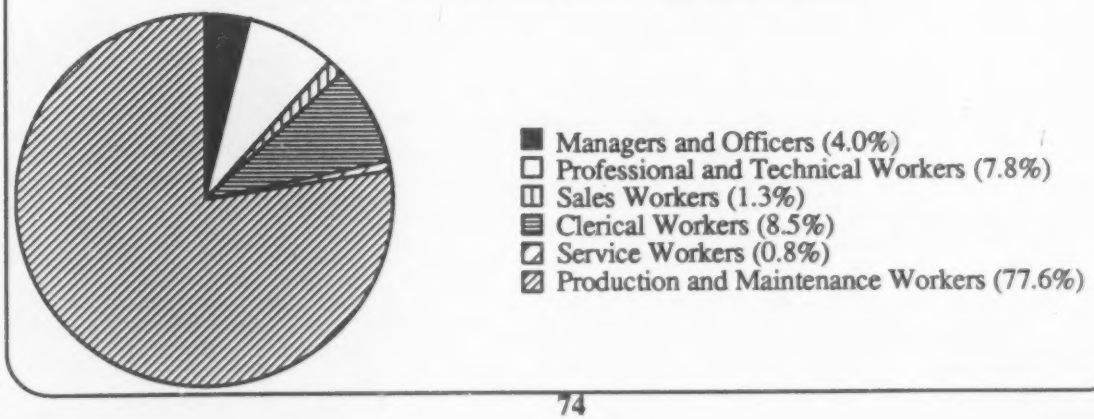
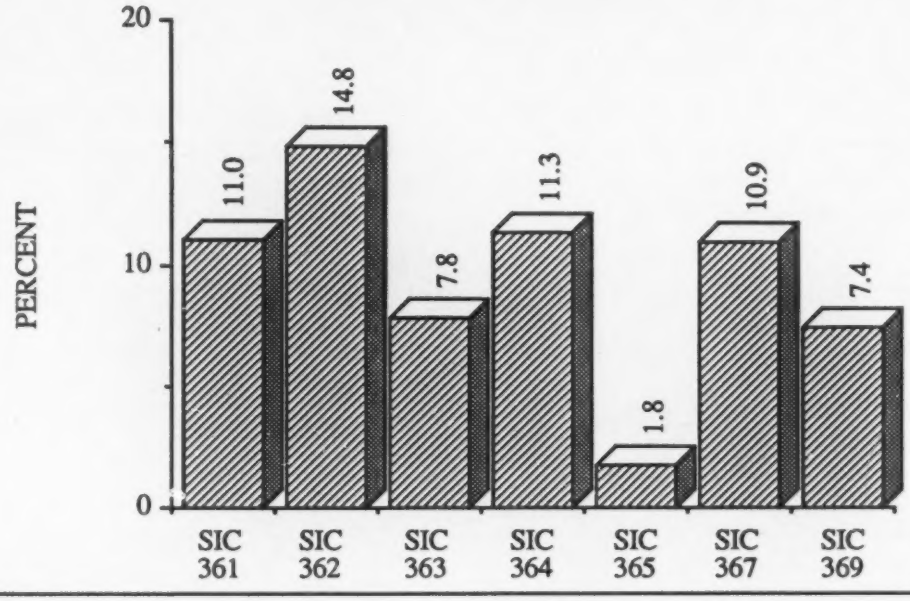


FIGURE 31
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 37

TRANSPORTATION EQUIPMENT
June 1986

This major group includes establishments primarily engaged in manufacturing equipment for transportation via land, water, and air. It includes the manufacturing of motor vehicles, aircraft, missiles, boats, railroad equipment, and other transportation equipment.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	23,400	NA	100.0
Managers and Officers	930	NA	4.0
Financial Managers	50	7.8	0.2
Personnel and Labor Relations Managers	40	7.0	0.2
Purchasing Managers	30	7.4	0.1
Marketing, Advertising, and Public Relations Managers	50	10.3	0.2
Engineering, Math, and Natural Science Managers	50	24.9	0.2
Industrial Production Managers	210	10.3	0.9
General Managers and Top Executives	290	7.9	1.2
Other Managers and Administrators	210	NA	0.9
Professional and Technical Workers	1,150	NA	4.9
Accountants and Auditors	60	8.2	0.3
Budget Analysts	20	8.4	0.1
Other Financial Specialists	30	NA	0.1
Purchasing Agents and Buyers, except Farm Products	120	8.8	0.5
Personnel and Labor Relations Specialists	30	16.3	0.1
Cost Estimators	20	17.9	0.1
Other Management Support Workers	40	NA	0.2
Electrical and Electronic Engineers	20	11.6	0.1
Industrial Engineers	120	7.3	0.5
Mechanical Engineers	190	13.6	0.8
Other Engineers	60	NA	0.3
Electrical and Electronic Engineering Technicians and Technologists	30	20.2	0.1
Industrial Engineering Technicians and Technologists	40	30.0	0.2
Mechanical Engineering Technicians and Technologists	50	25.6	0.2
Drafters	120	19.0	0.5

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Engineering Technicians and Technologists	60	NA	0.3
EDP Systems Analysts	40	5.9	0.2
Computer Programmers	30	13.8	0.1
Health Practitioners and Related Health Occupations	20	18.7	0.1
Other Professional and Technical Workers	50	NA	0.2
Sales Workers	220	NA	1.0
Sales Supervisors	20	26.2	0.1
Sales Engineers	20	30.7	0.1
Sales Representatives, Scientific - except Retail	40	17.2	0.2
Sales Representatives, Nonscientific - except Retail	90	26.0	0.4
Other Sales and Related Workers	50	NA	0.2
Clerical Workers	1,620	NA	6.9
Clerical and Administrative Supervisors	100	16.4	0.4
Secretaries	270	7.5	1.2
Receptionists and Information Clerks	20	21.8	0.1
Typists	40	20.4	0.2
Personnel Clerks	30	21.1	0.1
Order Clerks	40	20.6	0.2
Procurement Clerks	40	14.1	0.1
Bookkeeping, Accounting, and Auditing Clerks	160	11.3	0.7
Payroll and Timekeeping Clerks	30	10.8	0.1
Billing, Cost, and Rate Clerks	40	14.1	0.2
General Office Clerks	130	12.7	0.5
Computer Operators	30	5.7	0.1
Data Entry Keyers	40	13.5	0.2
Switchboard Operators	20	15.4	0.1
Production, Planning, and Expediting Clerks	140	15.7	0.6
Stock Clerks - Stockroom or Warehouse	240	11.6	1.0
Traffic, Shipping, and Receiving Clerks	160	11.9	0.7
Other Clerical and Administrative Workers	90	NA	0.4
Service Workers	240	NA	1.0
Guards and Watch Guards	60	27.5	0.3
Janitors and Cleaners	180	15.4	0.7
Production and Maintenance Workers	19,240	NA	82.2
Mechanic and Repairer Supervisors	110	15.9	0.5
Production Supervisors	710	5.7	3.0
Transportation and Material Moving Supervisors	40	14.2	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Precision Inspectors, Testers, and Graders	140	21.4	0.6
Production Inspectors	450	8.1	1.9
Machinery Maintenance Mechanics	330	18.8	1.4
Machinery Maintenance Workers	30	21.3	0.1
Maintenance Repairers, General Utility	310	18.3	1.3
Other Mechanics and Repairers	220	NA	0.9
Carpenters	270	28.5	1.1
Electricians	90	25.9	0.4
Other Construction and Extractive Workers	70	NA	0.3
Tool and Die Makers	220	5.4	0.9
Machinists	930	15.4	4.0
Precision Tool Grinders, Filers, and Sharpeners	60	11.9	0.3
Precision Layout Workers, Metal	60	0.6	0.3
Sheet Metal Workers	270	29.0	1.1
Other Precision Metal Workers	130	NA	0.6
Other Precision Workers	80	NA	0.3
Sawing Machine Setters and Set-up Operators, Metal and Plastic	40	25.0	0.2
Lathe and Turning Machine Setters and Set-up Operators, Metal and Plastic	510	28.9	2.2
Drilling and Boring Machine Setters and Set-up Operators, Metal and Plastic	140	5.3	0.6
Grinding and Buffing Machine Setters and Set-up Operators, Metal and Plastic	170	22.5	0.7
Press and Press Brake Machine Setters and Set-up Operators, Metal and Plastic	260	25.8	1.1
Machine Forming Operators and Tenders, Metal and Plastic	1,000	30.9	4.3
Numerical Control Machine Operators and Tenders, Metal and Plastic	70	12.8	0.3
Combination Machine Tool Setters and Set-up Operators, Metal and Plastic	100	15.1	0.4
Combination Machine Tool Operators and Tenders, Metal and Plastic	80	13.6	0.3
Welding Machine Setters and Set-up Operators	670	17.8	2.9
Welding Machine Operators and Tenders	120	27.2	0.5
Plastic Molding and Casting Machine Operators and Tenders	20	28.5	0.1
Heat Testing Machine Operators and Tenders, Metal and Plastic	60	17.7	0.3
Other Metal and Plastic Machine Setters and Set-up Operators	300	NA	1.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Other Metal and Plastic Machine Operators and Tenders	550	NA	2.3
Sewing Machine Operators, Non-Garment	20	19.6	0.1
Painters, Transportation Equipment	240	20.9	1.0
Painting and Related Machine Setters and Set-up Operators	80	34.8	0.3
Packaging and Filling Machine Operators and Tenders	30	29.7	0.1
Other Machine Setters and Set-up Operators	110	NA	0.5
Other Machine Operators and Tenders	80	NA	0.3
Precision Electrical and Electronic Equipment Assemblers	30	27.9	0.1
Other Precision Metal Assemblers	420	NA	1.8
Machine Assemblers	2,180	27.9	9.3
Electrical and Electronic Assemblers	500	7.8	2.1
Welders and Cutters	260	21.5	1.1
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	3,570	20.4	15.2
Other Hand Workers	1,700	NA	7.3
Truck Drivers, Heavy - inc. Tractor-Trailer	90	17.0	0.4
Other Motor Vechicle Operators	20	NA	0.1
Crane and Tower Operators	40	34.0	0.2
Industrial Truck and Tractor Operators	290	27.3	1.2
Mechanic and Repairer Helpers	30	5.1	0.1
Material Movers, Hand	240	19.8	1.0
Hand Packers and Packagers	70	34.5	0.3
Other Laborers	600	NA	2.6

1/ Details may not add to total due to rounding or data suppression.

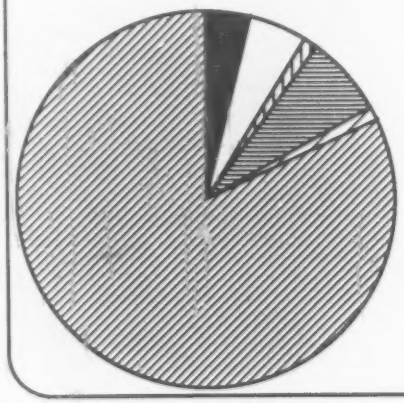
FIGURE 15

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic and Precision	3,570	15.2
Machine Assemblers	2,180	9.3
Machine Forming Operators and Tenders, Metal and Plastic	1,000	4.3
Machinists	930	4.0
Production Supervisors	710	3.0

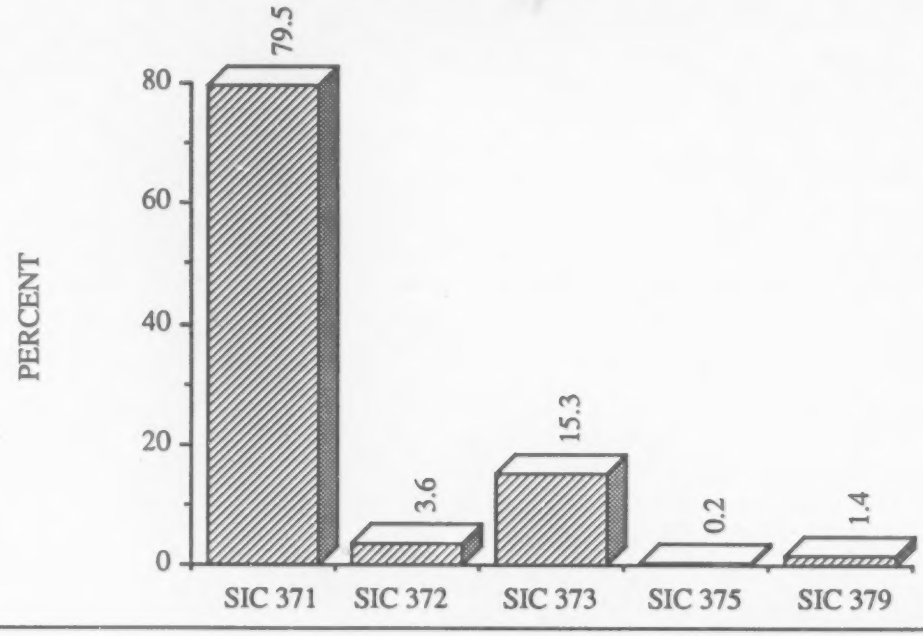
FIGURE 32

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY



- Managers and Officers (4.0%)
- Professional and Technical Workers (4.9%)
- Sales Workers (1.0%)
- Clerical Workers (6.9%)
- Service Workers (1.0%)
- Production and Maintenance Workers (82.2%)

FIGURE 33
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 39

MISCELLANEOUS MANUFACTURING INDUSTRIES
June 1986

This major group includes establishments primarily engaged in manufacturing items not classified in any other major group. Included in this group are jewelry, silverware, musical instruments, toys, sporting goods, pens, pencils, novelties, brooms, caskets, and other miscellaneous goods.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	6,430	NA	100.0
Managers and Officers	370	NA	5.8
Financial Managers	20	16.2	0.3
Personnel and Labor Relations Managers	10	16.0	0.2
Purchasing Managers	10	25.	0.2
Marketing, Advertising, and Public Relations Managers	20	29.7	0.3
Engineering, Math, and Natural Science Managers	20	28.6	0.3
Industrial Production Managers	40	16.0	0.6
General Managers and Top Executives	210	10.2	3.2
Other Managers and Administrators	40	NA	0.6
Professional and Technical Workers	290	NA	4.5
Accountants and Auditors	20	31.6	0.3
Purchasing Agents and Buyers, except Farm Products	30	15.2	0.5
Personnel and Labor Relations Specialists	10	12.0	0.1
Cost Estimators	10	25.6	0.2
Other Management Support Workers	10	NA	0.1
Industrial Engineers	20	13.8	0.3
Mechanical Engineers	20	10.2	0.3
Other Engineers	20	NA	0.3
Mechanical Engineering Technicians and Technologists	10	31.0	0.2
Drafters	50	19.3	0.8
Other Engineering Technicians and Technologists	10	NA	0.2
Designers	60	31.3	0.9
Other Professional and Technical Workers	20	NA	0.3

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Sales Workers	260	NA	4.0
Sales Supervisors	30	22.0	0.5
Sales Engineers	10	32.6	0.2
Sales Representatives, Scientific - except Retail	40	24.7	0.6
Sales Representatives, Nonscientific - except Retail	170	18.2	2.6
Other Sales and Related Workers	10	NA	0.2
Clerical Workers	660	NA	10.3
Clerical Supervisors	20	15.2	0.3
Adjustment Clerks	20	18.2	0.3
Secretaries	110	10.5	1.7
Receptionists and Information Clerks	10	27.0	0.2
Typists, Word Processing	10	33.8	0.2
Personnel Clerks	10	9.9	0.2
Order Clerks	30	15.7	0.5
Procurement Clerks	10	9.6	0.2
Bookkeeping, Accounting, and Auditing Clerks	100	10.8	1.6
Payroll and Timekeeping Clerks	10	14.7	0.2
General Office Clerks	80	18.5	1.2
Computer Operators	10	22.8	0.2
Data Entry Keyers	20	13.3	0.3
Switchboard Operators	10	16.5	0.2
Production, Planning, and Expediting Clerks	30	13.6	0.4
Weighers, Measurers, Checkers, and Samplers	10	21.5	0.2
Stock Clerks - Stockroom or Warehouse	20	19.7	0.3
Traffic, Shipping, and Receiving Clerks	130	13.7	2.0
Other Clerical and Administrative Workers	20	NA	0.3
Service Workers	50	NA	0.7
Janitors and Cleaners	40	13.6	0.6
Other Service Workers	10	NA	0.1
Production and Maintenance Workers	4,800	NA	74.7
Mechanic and Repairer Supervisors	10	16.6	0.2
Production Supervisors	230	11.5	3.6
Production Inspectors	80	12.2	1.2
Machinery Maintenance Mechanics	30	24.3	0.5
Maintenance Repairers, General Utility	130	12.1	2.0
Tool and Die Makers	10	12.3	0.2
Other Construction and Extractive Workers	110	NA	1.7
Machinists	30	20.4	0.5
Jewelers and Silversmiths	20	25.0	0.3
Other Precision Workers	560	NA	8.7

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Machine Tool Cutting Operators	40	32.6	0.6
Punching Machine Setters and Set-up Operators, Metal and Plastic	20	28.3	0.3
Machine Forming Operators and Tenders, Metal and Plastic	180	17.0	2.8
Plastic Molding and Casting Machine Setters and Set-up Operators	60	32.7	0.9
Other Metal and Plastic Machine Setters and Set-up Operators	10	NA	0.2
Other Metal and Plastic Machine Operators and Tenders	60	NA	0.9
Woodworking Machine Operators and Tenders, except Sawing	70	32.4	1.1
Coating, Painting, and Spraying Machine Operators and Tenders	40	13.9	0.6
Cleaning, Washing, and Pickling Equipment Operators and Tenders	10	15.6	0.2
Crushing, Grinding, Mixing, and Blending Machine Operators and Tenders	10	25.8	0.2
Extruding, Forming, and Pressing Machine Operators and Tenders	30	30.8	0.5
Packaging and Filling Machine Operators and Tenders	120	27.0	1.8
Other Machine Setters and Set-up Operators	450	NA	7.0
Other Machine Operators and Tenders	330	NA	5.1
Welders and Cutters	90	21.5	1.4
Grinding and Polishing Workers, Hand	60	29.5	0.9
Assemblers and Fabricators - except Machine, Electrical, Electronic, and Precision	1,090	13.3	17.0
Other Hand Workers	470	NA	7.3
Industrial Truck and Tractor Operators	40	16.3	0.6
Other Material Moving Equipment Operators	30	NA	0.5
Material Movers, Hand	70	19.9	1.1
Hand Packers and Packagers	250	17.9	3.9
Other Laborers	60	NA	0.9

1/ Details may not add to total due to rounding or data suppression.

TABLE 16

THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Assemblers and Fabricators, except Machine, Electrical, Electronic and Precision	1,090	17.0
Hand Packers and Packagers	250	3.9
Production Supervisors	230	3.6
General Managers and Top Executives	210	3.2
Machine Forming Operators and Tenders, Metal and Plastic	180	2.8

FIGURE 34

PERCENT DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL CATEGORY

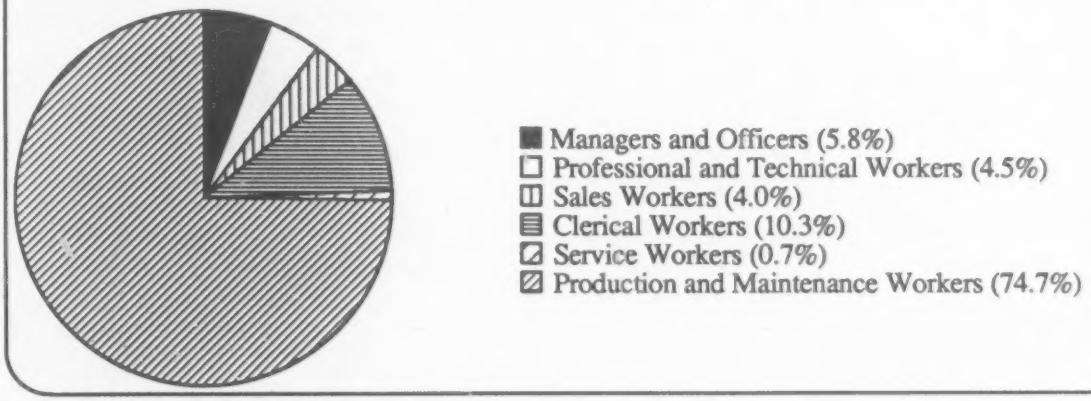
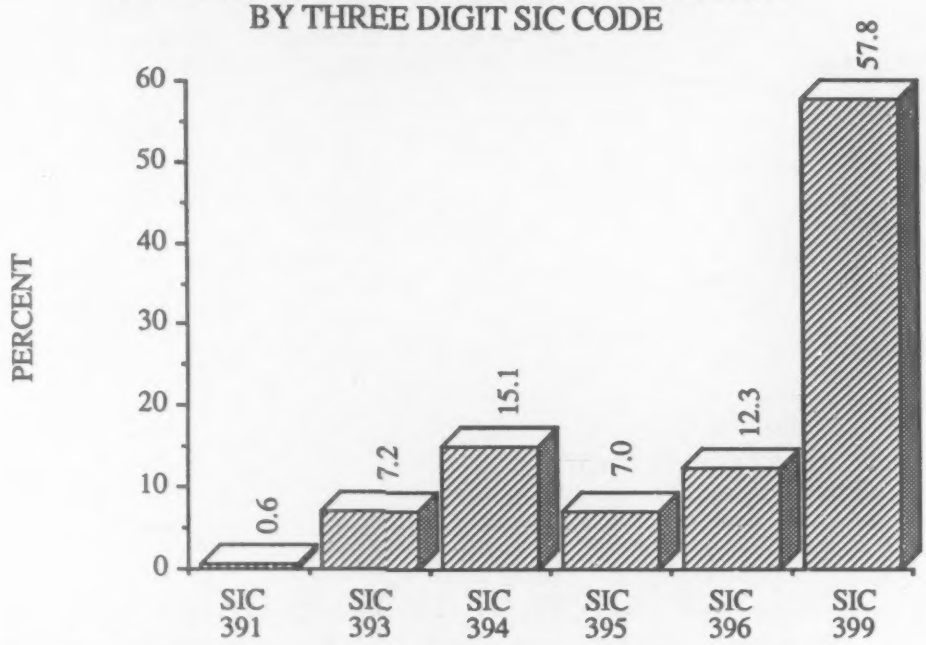


FIGURE 35
ESTIMATED EMPLOYMENT DISTRIBUTION
BY THREE DIGIT SIC CODE



SIC 806

HOSPITALS
June 1986

Establishments in this major group are primarily engaged in providing diagnostic services, extensive medical treatment including surgical services, and other hospital services, as well as continuous nursing services.

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Total Employment	89,480	NA	100.0
Managers and Officers	3,310	NA	3.7
Financial Managers	190	1.9	0.2
Personnel and Labor Relations Managers	150	2.5	0.2
Purchasing Managers	120	2.3	0.1
Marketing, Advertising, and Public Relations Managers	90	3.8	0.1
Administrative Services Managers	90	8.6	0.1
Engineering, Math, and Natural Science Managers	90	3.8	0.1
Medical and Health Services Managers	1,100	3.2	1.2
Food Service and Lodging Managers	200	2.9	0.2
General Managers and Top Executives	700	4.3	0.8
Other Managers and Administrators	580	NA	0.6
Professional and Technical Workers	46,950	NA	52.5
Accountants and Auditors	160	3.0	0.2
Budget Analysts	60	8.2	0.1
Other Financial Specialists	80	NA	0.1
Purchasing Agents and Buyers, except Farm Products	140	2.9	0.2
Personnel and Labor Relations Specialists	180	3.9	0.2
Other Management Support Workers	180	NA	0.2
Other Engineers	70	NA	0.1
Electrical and Electronic Engineering Technicians and Technologists	60	8.2	0.1
Other Engineering Technicians and Technologists	100	NA	0.1
Other Science Technicians and Technologists	200	NA	0.2
EDP Systems Analysts	110	5.7	0.1
Computer Programmers	120	3.7	0.1
Computer Programmer Aides	110	6.4	0.1
Psychologists	220	6.9	0.2

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Social Workers, Medical and Psychiatric	1,080	5.0	1.2
Social Workers, except Medical and Psychiatric	170	7.5	0.2
Social Service Technicians	210	8.4	0.2
Clergy	80	3.8	0.1
Nursing Instructors	320	4.1	0.4
Teachers and Instructors, Vocational Education and Training	190	7.7	0.2
Other Teachers and Instructors	460	NA	0.5
Librarians, Professional	60	4.3	0.1
Technical Assistants, Library	60	7.5	0.1
Physicians and Surgeons	1,890	10.9	2.1
Respiratory Therapists	870	2.2	1.0
Occupational Therapists	180	6.2	0.2
Physical Therapists	470	2.8	0.5
Corrective and Manual Arts Therapists	70	6.7	0.1
Speech Pathologists and Audiologists	100	6.4	0.1
Recreational Therapists	220	5.9	0.2
Other Therapists	240	NA	0.2
Registered Nurses	20,850	1.1	23.3
Licensed Practical Nurses	6,450	1.5	7.2
Emergency Medical Technicians	300	7.7	0.3
Physicians' Assistants	170	7.5	0.2
Pharmacists	650	1.7	0.7
Dieticians and Nutritionists	280	3.4	0.3
Dietetic Technicians	340	9.2	0.4
Medical and Clinical Laboratory Technologists	2,080	2.5	2.3
Medical and Clinical Laboratory Technicians	1,240	3.2	1.4
Medical Records Technicians	650	3.8	0.7
Nuclear Medicine Technologists	200	3.6	0.2
Radiologic Technologists	900	2.6	1.0
Radiologic Technicians	720	4.7	0.8
Electroencephalograph Technicians and Technologists	140	4.2	0.2
Electrocardiograph Technicians and Technologists	390	10.4	0.4
Surgical Technicians and Technologists	390	3.9	1.1
Other Health Professionals, Paraprofessionals and Technicians	2,000	NA	2.2
Public Relations Specialists and Publicity Writers	80	4.8	0.1
Other Professional and Technical Workers	90	NA	0.1
Sales Workers	460	NA	0.5
Cashiers	410	5.2	0.4
Other Sales Workers	50	NA	0.1

Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Clerical Workers	14,640	NA	16.4
Clerical Supervisors	570	2.3	0.6
Adjustment Clerks	170	4.3	0.2
Medical Secretaries	1,360	3.6	1.5
Other Secretaries	1,170	NA	1.3
Stenographers	80	15.2	0.1
Receptionists and Information Clerks	600	3.7	0.7
Typists	1,220	4.4	1.4
Typists, Word Processing	170	12.8	0.2
Personnel Clerks	150	3.4	0.2
File Clerks	390	7.0	0.4
Order Clerks	60	8.2	0.1
Procurement Clerks	120	4.6	0.1
Statistical Clerks	780	5.2	0.9
Interviewing Clerks, except Personnel and Social Welfare	790	3.2	0.9
Bookkeeping, Accounting, and Auditing Clerks	570	3.2	0.6
Payroll and Timekeeping Clerks	150	3.2	0.2
Billing, Cost, and Rate Clerks	690	3.4	0.8
General Office Clerks	2,330	2.9	2.6
Billing, Posting, and Calculating Machine Operators	60	9.9	0.1
Computer Operators	220	3.9	0.2
Data Entry Keyers	300	2.9	0.3
Other Office Machine Operators	300	NA	0.3
Switchboard Operators	670	4.1	0.8
Stock Clerks - Stockroom or Warehouse	810	4.4	0.9
Traffic, Shipping, and Receiving Clerks	100	4.6	0.1
Other Material Recording and Related Workers	90	NA	0.1
Other Clerical and Administrative Workers	720	NA	0.8
Service Workers	21,150	NA	23.6
Housekeepers	750	5.3	0.8
Other Service Supervisors	420	NA	0.5
Guards and Watch Guards	540	3.5	0.6
Food Servers, Outside	1,370	3.3	1.5
Dining Room and Cafeteria Attendants	310	9.8	0.3
Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria	190	7.8	0.2
Bakers, Bread and Pastry	100	3.7	0.1
Cooks, Institutional or Cafeteria	670	2.4	0.8
Cooks, Short Order	60	8.6	0.1
Food Preparation Workers	1,520	4.0	1.7
Other Food Service Workers	260	NA	0.3
Medical Assistants	510	5.0	0.6
Nurse Aides, Orderlies, and Attendants	6,290	2.4	7.0
Home Health Aides	200	7.7	0.2

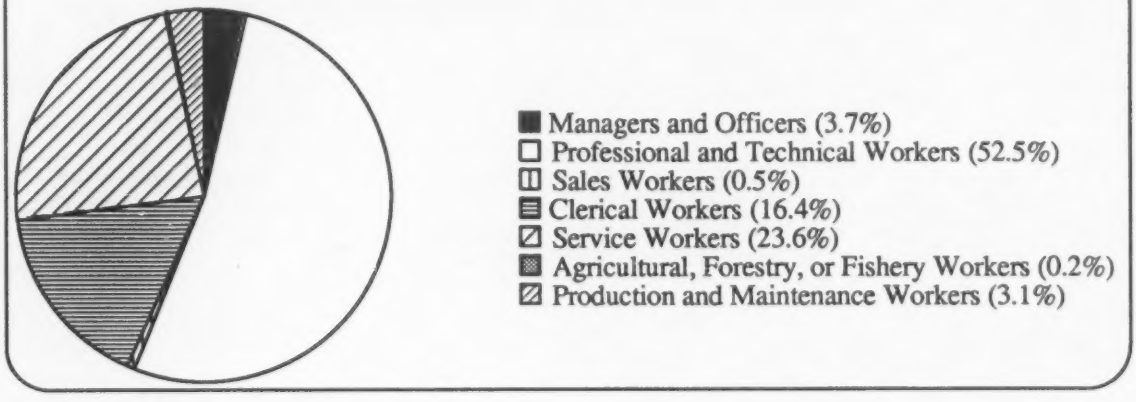
Occupation	Estimated Employment 1/	Relative Error %	Percent Distribution 1/
Psychiatric Aides	2,410	12.9	2.7
Physical Therapy Assistants and Aides	340	3.6	0.4
Occupational Therapy Assistants and Aides	70	6.1	0.1
Pharmacy Assistants	800	2.2	0.9
Other Health Service Workers	540	NA	0.6
Maids and Housekeeping Cleaners	2,990	2.4	3.3
Janitors and Cleaners	590	5.4	0.7
Other Service Workers	220	NA	0.2
Agricultural, Forestry, and Fishery Workers	210	NA	0.2
Gardeners and Groundskeepers, except Farm Workers	210	4.0	0.2
Production and Maintenance Workers	2,760	NA	3.1
Mechanic and Repairer Supervisors	140	4.2	0.2
Other Production Supervisors	50	NA	0.1
Machinery Maintenance Mechanics	60	9.1	0.1
Maintenance Repairers, General Utility	550	2.9	0.6
Heating, Air Conditioning, and Refrigeration Mechanics	140	5.2	0.1
Electromedical Equipment Repairers	80	3.6	0.1
Menders - Garments, Linens, and Related	60	5.7	0.1
Carpenters	120	5.0	0.1
Electricians	150	4.5	0.2
Painters and Paperhangers	140	6.2	0.2
Plumbers and Pipefitters	70	4.9	0.1
Laundry and Drycleaning Machine Operators and Tenders, except Pressing	470	5.4	0.5
Pressing Machine Operators and Tenders	180	7.6	0.2
Boiler Operators and Tenders, Low Pressure	80	8.5	0.1
Truck Drivers, Light-inc. Delivery and Route Workers	70	8.2	0.1
Other Motor Vehicle Operators	70	NA	0.1
Parking Lot Attendants	60	12.3	0.1
Other Production Workers	100	NA	0.1
Other Laborers	170	NA	0.2

1/ Details may not add to total due to rounding or data suppression.

TABLE 17
THE FIVE LARGEST SPECIFIC OCCUPATIONS

Occupation	Estimated Employment	Percent of Total Employment
Registered Nurses	20,850	23.3
Licensed Practical Nurses	6,450	7.2
Nurse Aides, Orderlies, and Attendants	6,290	7.0
Maids and Housekeeping Cleaners	2,990	3.3
Psychiatric Aides	2,410	2.7

FIGURE 36
PERCENT DISTRIBUTION OF EMPLOYMENT
BY MAJOR OCCUPATONAL CATEGORY


Managers and Officers (3.7%)
Professional and Technical Workers (52.5%)
Sales Workers (0.5%)
Clerical Workers (16.4%)
Service Workers (23.6%)
Agricultural, Forestry, or Fishery Workers (0.2%)
Production and Maintenance Workers (3.1%)

Methodology

A questionnaire was mailed to sampled manufacturing establishments and hospitals in order to obtain occupational staffing data. The total occupational employment for an industry was then estimated from the responding establishments.

- **Sample**

The sample was drawn using procedures outlined in the OES Survey Operations Manual. Establishments were divided into different size classes by number of employees. All establishments with more than 250 employees were sampled. Establishments in each smaller size class were sampled in proportion to the employment in the size class; however, no establishment with fewer than four employees was sampled. Employment in these establishments was accounted for in the next larger size class. Each unit sampled was assigned a weight according to the ratio of units sampled in that size class. For example, when all units in a size class were sampled, the weight was one. When the units were sampled at a ratio of one out of four, the sampled unit was given a weight of four. The weighted establishment then represented itself and three other establishments.

- **Collection**

Data collection began in June 1986 and ended in March 1987. Two follow-up mailings, personal visits, or telephone calls were made to those establishments whose responses were deemed vital for statistical purposes, to those who had difficulty completing the questionnaire, or to those where clarification of the response was necessary.

- **Estimates**

Data from the questionnaires were keyed and loaded to tape. The tape was processed using the OES Survey Processing and Management Systems (SPAM) programs to sort and screen the data. The estimating programs sorted the data into size-class cells. The weighted employment of each occupation in each cell was then estimated individually and summed across all cells in order to produce the final occupational employment estimate for each industry.

- **Error**

Two types of errors, sampling and non-sampling, can affect the results of a survey. Sampling error is the difference between the estimates developed from data collected from a sample and the data collected from the universe from which the sample was drawn. Sampling error is measurable and is expressed as relative error. The relative error shown in the publication is such that the chances are two out of three that the results of comparable universal data collection would not differ by more than the percentage shown. Non-sampling error can arise from faulty questionnaire design, inability to collect necessary data, inaccuracy of data collected, and ineffective processing techniques. Non-sampling error cannot be measured.

- **Publication**

After the data file was processed through the OES estimates programs, a computer printout was received which contained the estimated employment for each occupation, the relative error of the occupational estimate, the percent distribution of the occupational employment, the number of employees reported in each occupation, and the number of establishments which reported each occupation.

Industries were surveyed at the 3-digit SIC level, however, published data are at the 2-digit level of detail. One exception is Hospitals, which is confined to SIC 806 and published accordingly. Both public and private hospitals are included in the survey, and the resulting data appears near the end of this publication.

Occupational data were not published for industries when the industry employment was less than 1,000. The estimated employment for occupations was rounded to the nearest ten. The estimated employment was put in a residual category when the estimated employment for an occupation was less than 15 or less than 0.05 percent of the total group employment, when the relative error was more than 35.0 percent, or when an occupation was not reported by at least four establishments. Although they are not published here, the suppressed industry and occupational data will be included in the industry/occupational matrix.

Relative error is not applicable (NA) for residual categories, occupational group totals, and total employment because it is not additive. The percent distribution was computed on the unrounded employment estimates, therefore, some occupations with the same published estimated employment may not bear the same percent distribution.

NOTE: Occasionally the sum of the occupations will not equal the total employment of the occupational category due to rounding.